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# THE CONDOR

A Magazine of Western  
Ornithology

Volume XXVII

March-April, 1925

Number 2



COOPER ORNITHOLOGICAL CLUB

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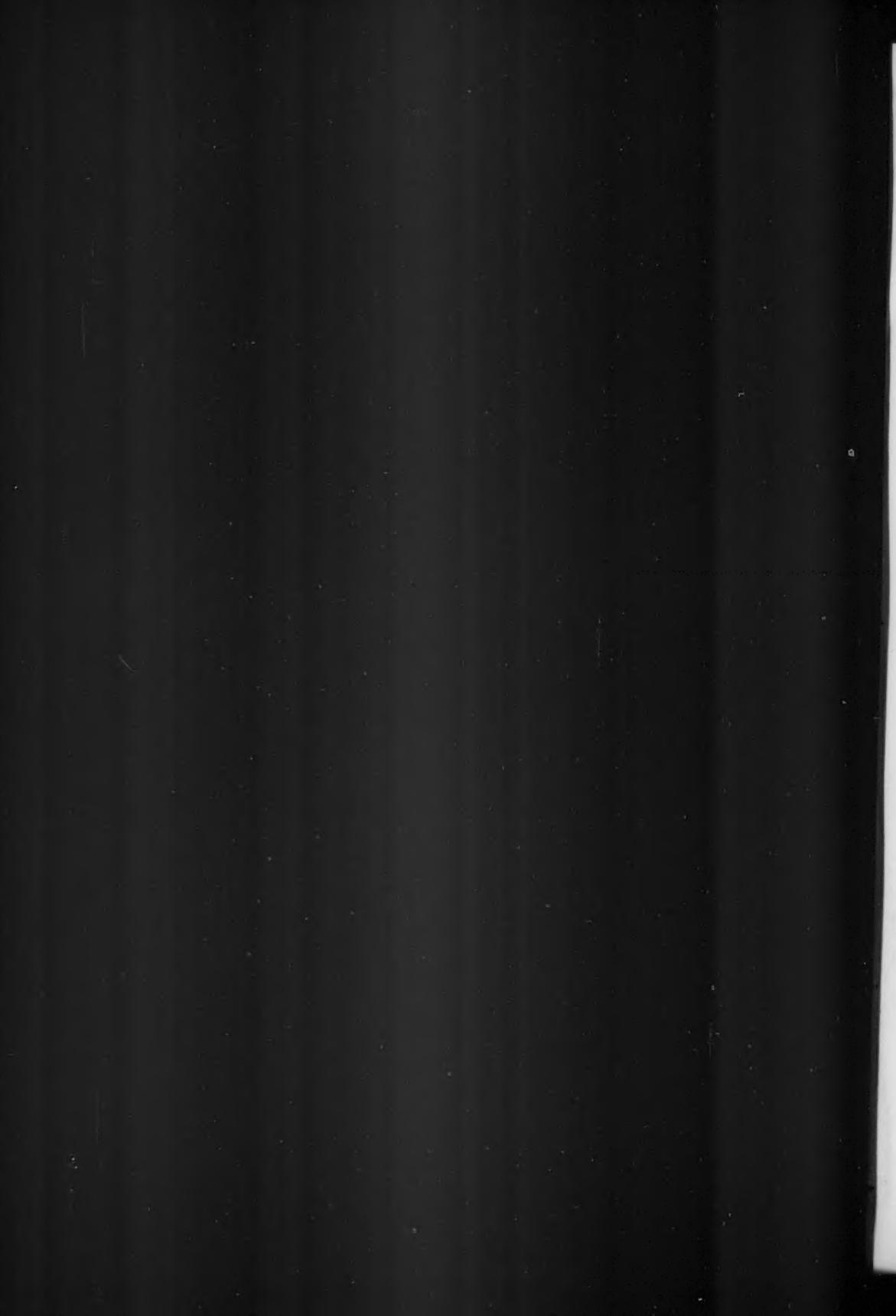
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## DISCOVERY OF A NEST AND EGGS OF THE BLUE-THROATED HUMMINGBIRD

WITH ONE PHOTOGRAPH BY MILTON S. RAY

By ROSE CAROLYN RAY

IT WAS on the 11th of May, 1924, that we made our camp at an elevation of 5675 feet in the Huachuca Mountains of Arizona. This rather well timbered range, that runs almost parallel with the Mexican boundary and some of whose southern spurs just cross the line, is about 40 miles in length and at some places rises to a height of nearly 10,000 feet. Mr. Ray spent several days each week in the higher altitudes and when I did not accompany him I confined my work to elevations around 6000 feet.

On the way to Arizona, articles, principally by Harry S. Swarth and F. C. Willard, those authorities on the bird-life of these mountains, had been very carefully read. Particularly interesting to me was the variety of hummingbirds which had been found in the region, including the tiny Morcom and the giant Blue-throat which, I believe, represent the extremes of size in the family on the North American continent. Among the other species were the large, brilliant Rivoli, and the curious White-eared, whose eggs, like those of the Morcom, apparently remain undescribed. As this family had always possessed a fascination for me, I decided early to spend much of my time in the haunts of its members.

One morning in the latter part of the month, while making my way up one of the narrow canyons, I came upon a small deserted building close to the ravine's sloping bed. As such structures often harbor nests of the Western Flycatcher, Western House Wren or other species, a point was always made to investigate them. On entering, I discovered a most unusual nest, woven to a pendant wire. As I approached, the sitting bird buzzed off, and, standing upon some old logs, I was enabled to see, in the dim light, that it held two eggs. I waited some time but the parent bird did not return, and as both nest and eggs were unfamiliar, I left them undisturbed. On the following day, however, accompanied by Mr. Ray, we paid this nest a second visit. The day's adventure stands in his field book as follows:

"Wednesday, May 28, 1924: We visited this morning the unknown nest that Mrs. Ray found yesterday. On reaching the old deserted shed, imagine my extreme bewilderment to see, sitting on a daintily woven nest of rare beauty, which was suspended on a wire hanging from one of the rafters, that *rara avis*, the great Blue-throated Hummingbird (*Cyanolaemus clemenciae*). Although the first I had ever seen afield, its large size, the distinctive white stripe near the eye and the very broadly white-tipped tail feathers quickly dissipated any doubt as to the bird's identity. I

felt I had some chance of locating a nest of the Rivoli; but in my fondest hopes I would have considered myself lucky to have gained even a fleeting glimpse of this species, of which H. S. Swarth, after spending all together a whole year in these mountains, covering hundreds of miles afield, definitely records but a single bird. I

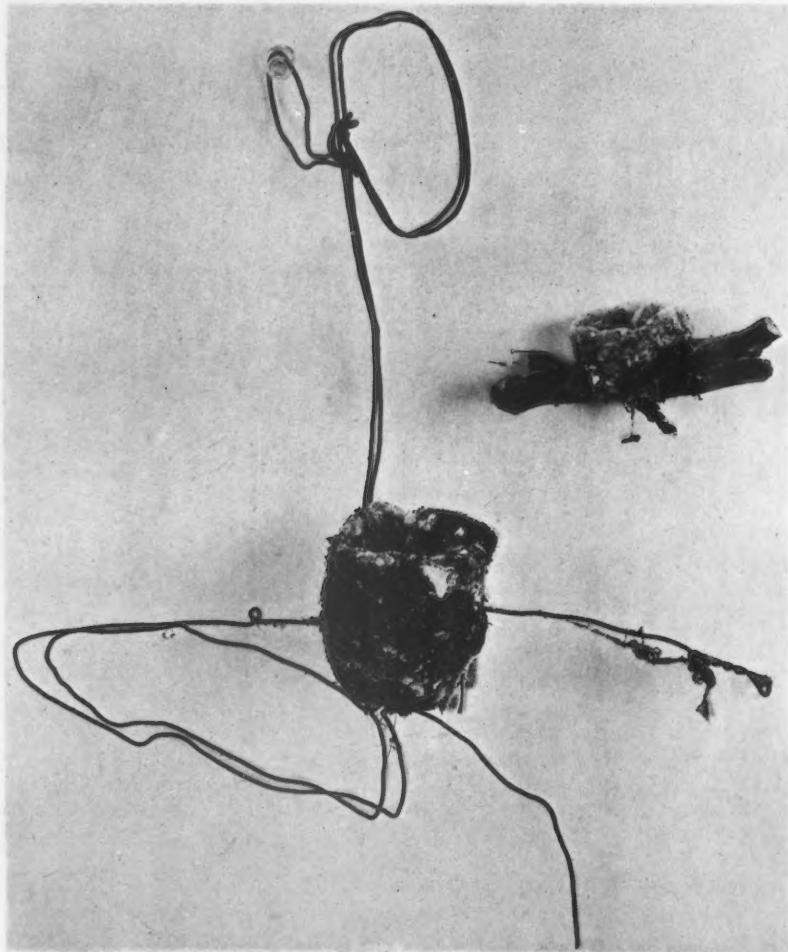


Fig. 16. NESTS OF THE BLUE-THROATED AND BLACK-CHINNED HUMMINGBIRDS, OF THE HUACHUCA MOUNTAINS, SHOWING COMPARATIVE SIZES. THE DIAMETER OF THE BLUE-THROAT'S NEST IS  $2\frac{1}{2}$  INCHES, THAT OF THE OTHER,  $1\frac{1}{2}$  INCHES.

endeavored to photograph the female on the nest, but as I drew nearer she whizzed off and disappeared up the canyon. After some little time we could hear a rather far-reaching but not overloud alarm note, "seek"—"seek"—"seek". Again and again

came the keen penetrating call note, and then the giant hummingbird flashed in beneath the rafters, poising in mid-air and remaining nearly motionless, save for her almost invisible whirring wings. Suddenly darting, she hovered directly over the nest and then quickly and lightly settled down upon it. On flushing the bird a second time I was able to learn that the two eggs the nest contained were unfortunately dark with incubation; as Keats has said: "Aye in the very temple of delight veiled melancholy has her sovereign shrine." However, packing the specimens very gingerly and with fervent hopes that they might eventually be saved, we returned to camp. The embryos proved well formed; yet by careful and tedious work I was successful in preparing the eggs for the cabinet. Although this task required about two hours, I felt amply repaid by having saved specimens that I could scarcely ever hope to replace. The pure white eggs are of the characteristic shape and measure, in inches, .61 x .40, .60 x .41.

"The nest is beautifully woven of moss, plant down and cottony fibers, webbed together on the exterior and decorated there with bits of very bright green moss and pale green lichens. The lining of the nest consists almost entirely of cottony fibers and down. It is unusually large for a hummingbird, measuring  $3\frac{1}{4}$  inches high by  $2\frac{3}{8}$  across. The cavity is  $1\frac{3}{4}$  inches across by  $1\frac{1}{8}$  deep.

"Compared with the Rivoli Hummingbird, the Blue-throat is appreciably greater in length and this difference is accentuated by its heavier build. Unlike the Blue-throat, the wings of the Rivoli project back of its tail, and this is very noticeable when the bird perches, at which time, also, we always noted a peculiar jerky movement of the head. We saw the Rivoli up to the very crest of the range, but our nesting Blue-throat was the only one seen on the entire trip."

It will be remembered that Oliver Davie (Nests and Eggs of North American Birds, page 291) chronicles but a single nest of this species, that found by Nelson on September 9, 1893, containing two eggs and located at an altitude of 11,500 feet on the slope of the Volcano Toluca in Mexico. This nest was built in the fork of a small shrub growing out of the face of a cliff, about 30 feet above its base, on the side of a canyon, in a forest of firs and pines. It was a handsome and rather bulky structure, of fine mosses smoothly quilted together and lined with the down of willow catkins. The nest was nearly inaccessible and one egg was broken in securing it; the other specimen measured .64 x .39.

George F. Breninger and, later, F. C. Willard are the only others, so far as I am able to learn, who have recorded finding nests of this species. As an indication of the scarcity of these eggs, I may state that of the 1250 species and subspecies of North American birds (not including, of course, 68 not rated), R. M. Barnes in his 1922 list only gives the eggs of five species precedence in rarity. Three of these are extinct or nearly so, and are, respectively, the California Condor, Ivory-billed Woodpecker, Passenger Pigeon, Black Swift, and Spoon-bill Sandpiper.

Our last view of the Huachuca Mountains was obtained as we speeded north by auto-stage. The day was typical of Arizona in early July, sultry and still. Far to the south, standing against the almost cloudless sky, rose the lofty range, with the dominant Miller Peak, partially obscured by a great, lazy bank of clouds. I feel I shall always remember these mountains with their wild rocky canyons, Sierran-like pine forests, and their varied and curious forms of bird life. But most indelibly impressed upon my memory will be the vision of the Blue-throated Hummingbird sitting motionless in the dim light upon its tropical-looking nest in the lonely canyon.

San Francisco, January 10, 1925.

NOTES ON SEA-BIRDS OBSERVED BETWEEN ENGLAND  
AND NEW ZEALAND VIA PANAMA

WITH ONE SET OF DIAGRAMS

By J. G. MYERS AND R. A. FALLA

THE FOLLOWING notes have been selected from a diary of observations kept by the former of the writers during a voyage per S. S. "Rimutaka" from Plymouth to Wellington in April and May, 1919. Their apology for publishing a paper in which much of the information must remain indefinite is that it may serve as a basis for future investigation of the distribution of many of the birds mentioned. Similar records have frequently been made on the older established steamship routes, but so far little has been done on the long sea-track lying obliquely across the globe and traversing the Atlantic and Pacific oceans from northeast to southwest. This gradual progress south has also made it possible to note more accurately the limits of the northern range of many Southern Ocean species during May.

The consecutive records and descriptions as noted from day to day are here given first, followed by some general remarks dealing with particular species.

April 5: The S. S. "Rimutaka" left Plymouth at 3:30 P. M. The only species of gull congregating in the harbor was the Common Gull. Individuals followed the ship till sunset when they were replaced by Lesser Black-backed Gulls (*Larus fuscus*), which were still present at dusk. Guillemots (*Uria troilus*) could be seen flying low over the water in small parties and singly.

April 6: A few Kittiwakes (*Rissa tridactyla*), the most pelagic of gulls, were in attendance. Gannets (*Sula bassana*) in small parties were frequently seen.

April 7: A few kittiwakes followed the vessel all day.

April 10: (Lat. 47° N, Long. 30° W.) For several hours in the afternoon the ship was attended by several gulls, white in color, with gray mantles. A couple of black spots about the head and neck, and a wavy line of darker color along the front of the expanded wings, seem to indicate that they were immature Kittiwakes.

April 13: (Lat. 41° N, Long. 46° W.) Examples of some pelagic species appeared daily at this time, but did not approach closely enough for identification. Most of them appeared to be dark above and white below.

April 18: (About a day's sail from the coast of Virginia.) A few Wilson Storm Petrels (*Oceanites oceanicus*) followed the ship today. A skua also followed the ship for a time. This bird was about the size of a Common Gull. The head, dorsal surface, band on the throat and wings above and below, were dark brown or black. The ventral surface was white, the beak short, wings ample, and tail conspicuously long; almost certainly the Arctic Skua (*Stercorarius parasiticus*). A few Herring Gulls (*Larus argentatus*) appeared, some in the brown plumage of immaturity.

April 19: (Approaching Chesapeake Bay and Newport News.) Gannets were observed fishing at some distance from land. In appearance they were very similar to the British species and were probably *Sula bassana*. Often one saw the little fountain of spray thrown up by the plummet-like dive of this bird, when the distance made the bird itself unnoticeable. Several young birds in brown plumage were present. Herring Gulls and Arctic Skuas were also in attendance, but the latter were not seen within the bay.

April 21: (Harbor of Newport News.) Herring Gulls, nearly all immature, were common, and also the large black-headed Laughing Gull (*Larus atricilla*).

April 26: Voyage continued. (Noon, Lat. 28° 50' N, Long. 74° 25' W.) Swarms of Wilson Storm Petrels were now following the ship, also an occasional skua. Nothing escapes the minute scrutiny of the storm petrels. An empty tin floats astern and every bird must individually circle round it, and above it, in turn, before a verdict of inedibility is passed. One may watch for hours and never see one alight after the manner of most birds, which swim up to food. While picking up something to their taste these little birds tread the water—walk on the surface with the help of their wings raised above their heads.

April 28: (Off the eastern end of Cuba at noon.) A few Wilson Storm Petrels still continued to follow the ship.

May 1: (Passage of the Panama Canal.) The following birds were noted: A black-headed bird in Limon Bay with the size, appearance and habits of a gannet; a small black swift; a large gray heron; a small white heron with faint dark markings on the outspread wings; a small blue heron; a kingfisher of the Halcyon type, blue-gray above and red below, with a white collar; a large black soaring raptorial bird, either Turkey Buzzard or vulture; a flock of 35 black cormorants on Gatun Lake; a small gray and white wader; numbers of Brown Pelicans (*Pelecanus occidentalis californicus*) in the Bay of Panama. No attempt has been made to identify the above birds on such brief acquaintance.

May 2: (Bay of Panama.) Farther out to sea the pelicans were replaced by gannets similar in appearance to those seen off Newport News, but probably not the same species.

May 5: (Near Galapagos Islands.) The same species of gannet as seen yesterday were still fishing in considerable numbers. They may have been the Blue-faced Booby (*Sula dactylatra*). A few solitary storm petrels were often seen quartering the waves after their usual manner; but never once did they approach the ship or manifest any interest in its wake; neither did they collect in companies. In both these particulars they differed from the Wilson Petrels seen in the Atlantic. Two Frigate Birds were observed for the first time at some distance from the ship. On June 29, 1918, these birds were seen as far in-shore as the anchorage off Panama. They were the common Central American species (*Fregata magnificens rothschildi* Mathews) which breeds on the Galapagos and elsewhere. The majestic soaring flight of the Frigate Bird is a never-ending source of pleasure to the traveler. On this afternoon a splendid specimen reconnoitered the ship for about ten minutes, soaring just above the masts with incomparable ease and grace, scarcely moving its wings, yet keeping pace with, and even circling around, the vessel. The shining, angular wings looked more like the elastic ligaments of a bat than feathered pinions, and the underparts showed as a distinct white oval against the jet black of the rest of the plumage. The bird's head, with the beak pointing forwards, was sunk between the shoulders except when it looked down on deck, while the long, black, forked tail spread and shut at will, like a pair of scissors.

May 12: (18°41'S, 118°07'W at noon.) The whole morning, Tropic Birds in two's and three's were flying about the ship. In color they were pure white, with a long, yellow, spear-like shaft of a tail, contrasting black feet, and a bright yellow bill. The yellow bill would seem to indicate that they were *Phaethon lepturus*, although possibly immature examples of *Phaethon aethereus*. They showed considerable interest in the ship and frequently gave voice to a sharp cry, like "kek". At times they could be seen resting quietly on the water. A white bird in the distance, almost certainly a Tropic Bird, was seen to dart down like a bolt from the blue and seize a flying fish in the air.

During the northern voyage in June, 1918, the Brown Petrel (*Priocnus cinereus*) was ubiquitous between New Zealand and Panama. On the present voyage a few had been seen in the distance almost every day since leaving the canal, and on May 12 they appeared in greater numbers and came close enough for identification. Records of this bird in more southern latitudes in the Indian Ocean mention that it sometimes follows ships, but these birds in the central Pacific manifested no interest except to shear off when the vessel came too close. In flight the bird shows a uniformly brown upper surface, and white underparts except for a broad dark edging on the underside of the wings. It quartered the ocean surface with ceaseless diligence. A solitary gannet with conspicuously black feet was in attendance until sunset.

May 13: (20°48'S, 122°28'W.) A pair of Tropic Birds (*Phaethon aethereus*) with bright orange bills and rectrices appeared.

May 14: (23°S, 126°20'W.) The Tropic Birds seen on the previous day were still about. Three splendid Frigate Birds appeared, one a male in full plumage, which is a uniform glossy black.

May 15: (Abreast of Pitcairn Island in the afternoon.) The weather was squally and the sky overcast, and no birds were seen except Brown Petrels engaged in their solitary hunting. Among the curios brought out by the islanders were the red rectrices of the Red-tailed Tropic Bird (*Phaethon rubricaudus*), each set in a white circlet of the body-feathers. They are known on Pitcairn as "Bosuns' tails."

May 19: (31°53'S, 148°10'W.) On this date the first albatross, either *Diomedea exulans* or *D. regia*, appeared about midday. A typical *Pterodroma* of some sort was also seen, of thick-set, stocky build with narrow-pointed wings. Above, it was uniform brownish gray. The head, chin and throat were gray, shading into white on the underparts.

May 20: (33°32'S, 153°04'W.) The *Pterodroma* seen on the 19th, or one exactly similar, appeared again, accompanied by several of the same size and habits, but uniformly brownish black in color. They may have been phases of a variable species like *Pterodroma neglecta*, or the dark bird may have been *P. macroptera*. One Black-browed Mollymauk (*Diomedea melanophrys*), distinguished by its bright yellow bill and dark mark through the eye, appeared; but no larger albatrosses were present.

May 21: (34°56'S, 158°15'W.) The black petrels mentioned earlier were numerous to the extent of some thirty following the ship. Two albatrosses (*Diomedea exulans*) in the brown plumage of immaturity were present in company with several *D. melanophrys*. A solitary *Pterodroma*, marked like a miniature mollymauk, was seen. This was probably *P. lessoni*.

May 22: (36°33'S, 163°30'W.) Wandering Albatrosses (*D. exulans*) were the commonest birds in sight. Immature birds with varying amounts of brown plumage were, on the whole, more abundant than the adults. Albatrosses will approach closer to a vessel than almost any other of the oceanic birds. Next to the ludicrous aspect of a meditative pelican, one of the most ridiculous sights of bird-life is afforded by an albatross in the act of settling on the water. One moment the bird is sailing along as only an albatross can, the next the narrow wings are bent and half folded at a gawky angle, and the huge feet are extended, like an old lady lifting her dress and carefully placing her feet in a muddy pathway.

No mollymauks appeared on this date, although the Brown Petrels and the undetermined species of *Pterodroma* already described on May 20, were frequent.

May 23: (37°33'S, 168°32'W.) An innumerable concourse of birds were in attendance all day. *Priofinus cinereus* was again very common. When taking food from the water it seldom settles as do the albatrosses and mollymauks, but scoops up the desired morsel with outstretched bill and neck, meanwhile treading water and flapping its wings energetically. The mollymauks in sight were all *Diomedea melanophrys*. One of these birds plunged completely below the surface for a submerged titbit, reappearing a yard away. Wandering Albatrosses (*D. exulans*) were present in numbers, showing a considerable range of plumage. In the fully adult birds the reddish yellow patch just behind the ear coverts is quite distinct, and appears on almost the exact spot where we see the last vestige of brown in the immature plumage. Several individuals were almost wholly white except for less than half the upper surface of each wing (see fig. 17b). In these the black tips to the under surface of each wing were reduced to mere edgings; but in the reddish patch on the neck and in other respects, they resembled the common form of *D. exulans* (fig. 17a).

The black petrel seen previously was still in company, and dove petrels (*Prion, sp.?*) appeared in two's and three's at some distance from the ship.

May 25: (Day missed owing to crossing of meridian 180°.) The sea was much calmer than it had been for some days, and Brown Petrels were frequently seen alight-

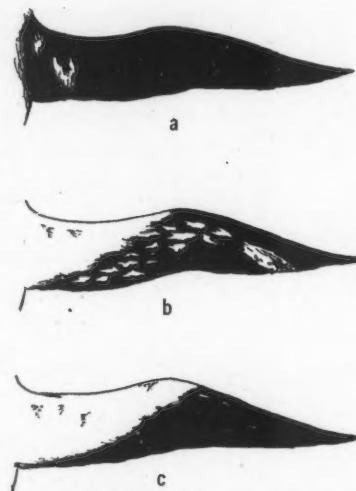


Fig. 17. DIAGRAMS OF COLORATION AS SHOWN ON THE UPPER SURFACES OF THE WINGS OF ALBATROSSES SEEN IN THE SOUTHERN OCEAN; a, THE COMMON FORM OF WANDERING ALBATROSS; b, POSSIBLY THE ROYAL ALBATROSS; c, SNOWY FORM OF WANDERING ALBATROSS, POSSIBLY *Diomedea chionoptera*.

ing on the surface. Two Sooty Albatrosses appeared in the distance, probably *Phoebe-tria palpebrata*, as the mantle in each was conspicuously light. The albatrosses already noted, the black petrels, and dove petrels were plentiful.

May 26: The number of birds in sight was much the same as on the previous day except that the Sooty Albatrosses had disappeared. Black-browed Mollymauks (*D. melanophrys*) were by far the commonest, including one young bird in which the bill was iron gray, and the neck suffused with gray.

June 2: (Off Cape Palliser, and along the coast to Wellington Heads.) Birds were very plentiful. *Priofinus cinereus* and the unidentified black petrel were still present, accompanied by mollymauks (*Diomedea melanophrys*), Sooty Albatrosses (*Phoebe-tria palpebrata*), Cape Pigeons (*Daption capensis*), Giant Petrels (*Ossifraga gigantea*) and Black-backed Gulls (*Larus dominicanus*) which appeared insignificant in size and labored in flight in comparison with the familiar oceanic birds which were still in company. Two fine albatrosses differently marked from any seen previously, were also observed. In these birds the white on the upper surface of the wings extended just to the humeral flexure (fig. 17b) and there appeared no vestige of the yellow neck patch which was a fairly constant feature of adult birds of the common form of *Diomedea exulans* and of the still more snowy form (fig. 17c). Possibly these two birds were examples of the Royal Albatross (*Diomedea epomophora* Lesson, *Diomedea regia* Buller). Our scanty knowledge of the breeding habits of this bird on Campbell Island and a section of the Antipodes shows it to be a comparatively fixed form, not passing through any brown phase of plumage at all. The first plumage of the immature bird also differs only very slightly from that of the adult; consequently no great range of variation is likely to be met with in this species. *D. exulans* apparently goes through the various brown stages until it attains the plumage usually considered adult, namely, white, with wings almost wholly blackish except for the white olecranal patch. The variable white form, however, in which the white on the wings extends far past the humeral flexure (fig. 17c) presents more difficulty in placing. Possibly the range of plumage variation in *D. exulans* extends through a stage at which it closely resembles *D. regia* and finally approximates to the form known as *D. chionoptera*, inhabiting the Indian Ocean. On the other hand, the white birds seen may have been examples of the Indian Ocean form at the eastern limit of its range.

Such a paper as the present, however, cannot hope to do more than offer suggestions in a matter which requires so much further investigation.

*Devonport, Auckland, New Zealand, December 23, 1924.*

#### AQUATIC VISITORS TO LAKE MERRITT, OAKLAND, CALIFORNIA

WITH ONE SET OF GRAPHS AND INSERTED TABLE.

By A. S. KIBBE

WHILE the general situation at Lake Merritt is a matter of common knowledge, it will not be amiss at this time to state that the lake is located in the heart of a residential district, less than one mile from the city hall of Oakland, California. It is composed of sea water, admitted from the estuary through tidal gates, and is freshened by rain and the discharge from two small streams. Its periphery is about three miles in length and its area approximates 150 acres. About one-third the area is closed off during the fall and winter by a boom which prevents encroachment by boats, leaving an expanse about 2,100 feet long and 1,000 or 1,100 feet wide, dedicated to the use of aquatic visitors. Certain of the species habitually visit the shore to graze over the lawns bordering the lake or to participate in eating the grain which is spread twice daily over an enclosure which also offers a fresh-water swimming pool and sprinkling, rain-like fountains. The bulk of this class is made up of pintails,

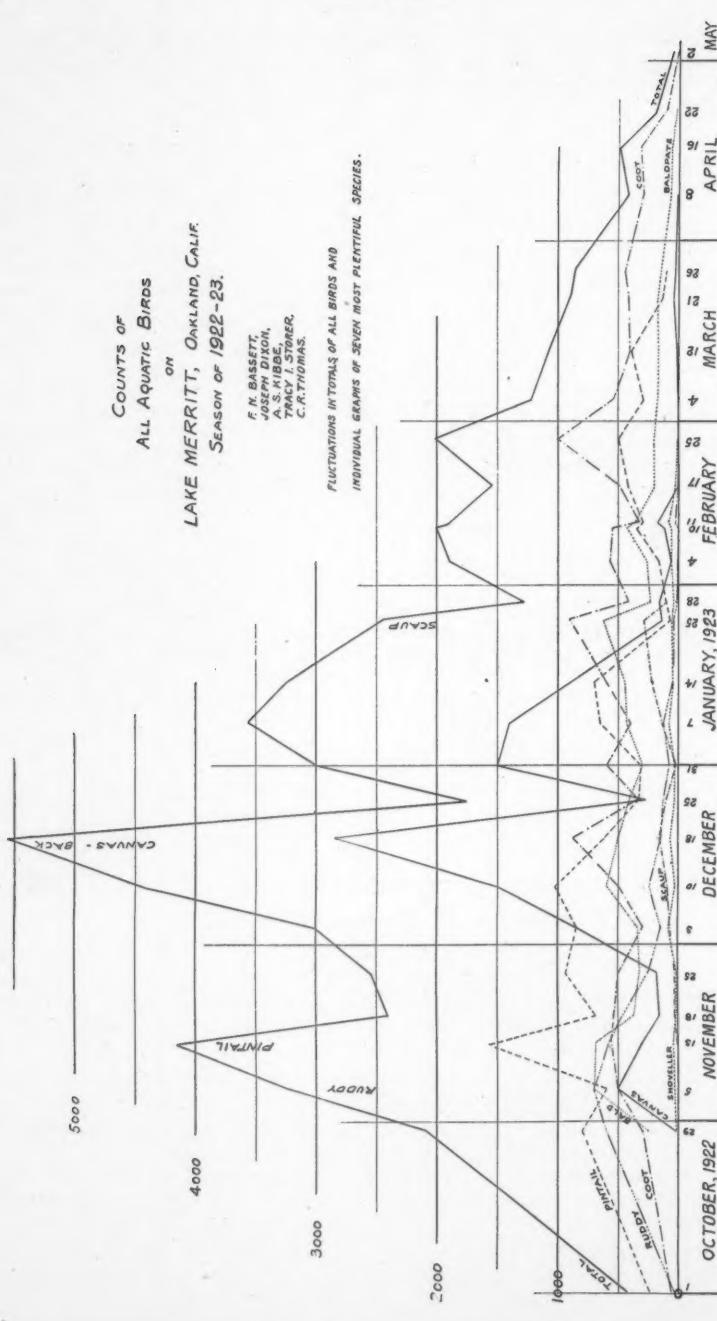


Fig. 18.

Number of Observation	1922															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Observer	T	TK	K	B	S	D	T	K	B	S	D	T	K	B	S	D
Date	Oct.	Oct.	Nov.	Nov.	Nov.	Nov.	Dec.	Dec.	Dec.	Dec.	Dec.	Jan.	Jan.	Jan.	Jan.	Feb.
	1	29	5	13	18	25	3	10	18	25	31	7	14	25	28	4
<i>Regular and numerous</i>																
Coot	60	300	500	560	542	500	300	500	879	330	600	400	600	908	420	572
Pintail	250	800	600	1575	681	934	850	1025	620	329	310	650	700	77	116	167
Canvas-back		30	500	300	165	178	850	1500	2850	280	1500	1400	900	147	158	68
Baldpate		250	700	685	375	320	340	600	505	405	300	430	450	625	240	262
Ruddy Duck	40	600	700	580	472	258	150	250	150	125	75	125	50	46	17	16
Scaup	2	1	1	14	30	21	80	100	162	100	24	140	225	296	109	418
Shoveller		20	35	50	20	20	85	35	70	40	36	86	50	62	50	63
<i>Smaller numbers and Casual</i>																
Buffle-head		1	16	43	25	58	26	30	23		8	33	5	17	17	16
American Golden-eye				21		2	17	6	54		7	26	20	37	10	14
European Widgeon							1		1	1			1			
Green-winged Teal					26								6			
Redhead																
White-winged Scoter				3	4											1
Eared Grebe	25	25	10	28	4	68	45	1	64	3	6	43	40	48	6	48
Pied-billed Grebe	5	4	5	23	1	1	9	1	7			5	3			5
Western Grebe		1	1	1					1							
Totals, including Gulls, etc.	424	2100	3244	4163	2407	2549	3012	4440	5563	1756	2995	3571	3251	2447	1280	1892

COUNTS OF ALL AQUATIC BIRDS ON LAKE MERRITT, OAKLAND, CALIFORNIA

1923													Totals of Observations 2 to 25	Average	Mid-January Series					
D	K	T	K	B	S	D	T	K	D	B	T	K			29	30	31	32	33	34
Feb.	Feb.	Feb.	Feb.	Feb.	Mar.	Mar.	Mar.	Mar.	Apr.	Apr.	Apr.	May	17th	11th	15th	14th	13th	18th		
4	10	11	17	25	4	12	21	26	8	16	22	2	1918	1920	1922	1923	1924	1925		
572	550	325	500	1000	546	413	423	450	300	327	110	6	12,418	517	200	250	650	600	600	500
167	350	300	425	500	302	400	145	110		7	8	3	11,966	498	900	1200	675	700	1300	1200
68	125	175	2	3	6	18	42	29	9	6	2	3	11,235	468	610	2300	475	900	1400	400
262	430	360	200	202	180	175	182	150	66	64	26		8,432	351	510	350	525	450	700	550
16	10	22	5	2		3		3	3				3,662	153	600	90	475	50	200	500
413	200	260	30	88	13	13	8	23	10	5	1	4	2,311	96	42	350	275	225	250	150
63	60	80	25	10	16	14	2	3	1				933	39	250	350	120	50	75	90
16	12	85	27	17	8	12	9	9					447	19		22	7	5	20	22
14	16	40	8	13	9	16	14	17	7	2	1	2	354	15	1	18	9	20	10	1
															20	22				1
1																				4
48	80	36	70	33	9	4	24	15	15	3	1		710	30	105	18	60	40	80	125
5		1	8	6									74	3	30	25	15	3	6	4
													52,542	2190						
1892	2003	1906	1550	2014	1222	1093	919	878	422	498	196	56	56,682	2362	3300	5138	3420	3251	5065	3801

CORNIA, BY BASSETT, DIXON, KIBBE, STORER, THOMAS AND VAN STRAATEN.

[THE CONDOR, XXVII, opp. p. 56]

baldpates, coots, a sprinkling of shovellers, and many gulls. Uninvited guests are the flocks of tame pigeons and Brewer blackbirds. Now and again a canvas-back will wander ashore, but for the most part these ducks remain afloat with the ruddys, scaups, buffle-heads, golden-eyes, teal and others.

The Audubon Association of the Pacific has taken its January field trip to the lake for a number of years, but it was not until 1918 that a member of the association, Mr. H. Van Straaten, submitted at a meeting a census he had taken of the lake birds on January 17 of that year, when he found some 3,300 birds there. In March, he reported that the number had been reduced to 668. Mr. Van Straaten returned to Holland soon thereafter, and the matter of censuses lay dormant until January, 1920, when the counting of the different species became a part of the regular program for the annual Audubon field day at the lake. A sharp fall of rain prevented the count in 1921, but it was made in each January thereafter. These six mid-January counts fluctuated from 3,250 to 5,150, and the meagerness of the information afforded thereby led to an arrangement whereby five members of the Cooper Ornithological Club and of the Audubon Association of the Pacific undertook to make weekly counts from the coming of the ducks in October, 1922, to the time of their final dispersion in May, 1923. The group was made up of Messrs. F. N. Bassett, Joseph Dixon, A. S. Kibbe, Tracy I. Storer and C. R. Thomas. The last-named gentleman had taken a count on October 1, which served as a start, but it was impossible to inaugurate the regular schedule until October 29. With some slight unavoidable irregularities the counts were maintained until May 2. Through a misunderstanding, counts were made on two successive days in February, thus affording an unintentional check between two observers.

The results were, in a sense, disappointing. The fluctuations in the numbers of the seven principal species precluded the making of a composite chart which would have any value and it was obvious that random counts at weekly intervals would leave vital questions unanswered. These facts and the pressure of other business postponed the publication of the data, and it was hoped that some means might be found in the succeeding season to devise some scheme whereby critical dates might be determined and counts made thereon. The season of 1923-24, however, was marred by dredging operations throughout the lake, and by the fruition of an idea in the mind of someone in a position of authority, to the effect that the birds in question needed an island. After our experience of the previous season, the making of counts in an atmosphere of constant disturbance was not attractive and no effort was made to organize a corps of observers, nor was it possible to do so for the current season, 1924-25.

In pursuance of requests from interested parties, the results of the above-mentioned counts are herewith submitted for what they may be worth, in two forms, tabular and graphic. Ten species appear neither in the tabulation nor the plotting of individual species, but their numbers are included in the grand totals.

The number of gulls frequenting the lake would probably average 150 to 200. The dominant species is the California, with ring-billed represented more than half the time. Glaucous-winged are present almost always, and occasionally to the number of 100. A few Bonapartes will appear now and then, and casual visits are made by western, herring and Heermann. Very rarely, a cormorant appears, a sandpiper or a few terns. As gulls are constantly flying over the bay cities all winter, and as the supply in the bay district is inexhaustible, there is little point to the recording of their numbers. We have had a European widgeon, and perhaps two, for guests at various seasons, notably 1922 and 1923.

The absence of any recording of mallards may excite some surprise. We have

Series	2	33	34
K	K	K	
th	13th	18th	
23	1924	1925	
00	600	500	
00	1300	1200	
00	1400	400	
50	700	550	
50	200	500	
25	250	150	
50	75	90	
5	20	22	
10	10	1	
1			
10	80	125	
3	6	4	
1	5065	3801	

constantly with us some hybrids which are understood to have been raised about the lake or park. The island may lead to an increase, but exotic specimens and partially tame ones do not appear to have a place in any such study as ours. The ordinary count of mallard-like birds ranges around two dozen, but the mallard score occasionally reaches between 30 and 60, so some real mallards may visit the lake now and again.

Following the columns of specific observations, there are given the total numbers and the averages per observation of eleven of the species observed between October 29 and April 8, inclusive. At the end of the table are given the results of the six mid-January counts above referred to.

The graphic chart, as submitted herewith, appears to the writer more fruitful of indications of what we would like to know, than of definite data. It does, however, afford suggestions of a number of interesting problems in bird psychology.

The four names printed vertically indicate the dates upon which the numbers of ruddy, pintail, canvas-back and scaup reached their well-defined maxima, greatly in excess of any subsequent record. The baldpate and shoveller develop no such characteristic. The baldpate, like the coot, seems to do what other masses of birds do, but whether they lead or follow is not clear.

The one striking feature of the chart is the indication that something very unusual happened during the week before Christmas, 1922. Here is a critical period to which nothing less than a daily count would afford a solution. It will be seen that 90 per cent of the canvas-backs departed the lake in that week, and of these nearly one-half returned the week following. The numbers of each of the seven species dropped remarkably in the same week, and in every case except that of the canvas-backs, reached higher numbers thereafter. Did the canvas-backs think they were starting away? Did they leave *en masse*, and drag a large portion of the others with them, and did something outside drive half of them *back*, or, did some occurrence at the lake drive them all away at once? A daily count for these two weeks would be of intense interest. A third explanation is possible, namely, that we have here recorded an annual occurrence, and if so, it would seem that mid-January is a period too critical for mere annual counts to afford valuable comparisons, and it might be wiser to move them back to mid-December, before the canvas-backs become all stirred up and jumpy. The tabulation of the six mid-January counts adds color to this hypothesis. There are two high counts and four medium counts. The 1925 count was made one week after the Audubon field trip because of unfavorable conditions encountered. The writer made the count, and his first impression on reaching the lake was that there were about one thousand birds less than had been on the lake during the previous Sunday, when he had been unable to count them in detail. If this were true, the count of 3,800 made on January 18 would have been 4,800 on January 11, and the decrease from the 5,100 of January, 1924, would have been inconsiderable. Following a study of the chart and tables, the writer is not unwilling to believe that the total numbers of the seven principal species visiting Lake Merritt during the six latest winters have not materially changed, with the possible exception of the shovellers. The 1918 and 1920 counts of this species reached 250 and 350, and nothing like these numbers have since been observed.

But, when all is said, we still lack any definite conception of the degree to which the visitants to this favored shelter might stand as criteria of the situation in which the great mass of like birds which pass through, or loiter within, the bay district, find themselves.

Berkeley, California, February 8, 1925.

## THE RELATIVE VALUE OF BIRD MEASUREMENTS

By W. H. BERGTOLD

**A**N ORNITHOLOGIST who has at hand a large skin collection experiences little or no difficulty in making a subspecific diagnosis of a given specimen. It is quite different with one who has but a small and incomplete collection, because present-day minute differences on which subspecies are based make the diagnosis of them at times extremely difficult in the absence of a large series of skins for comparison. This is all the more true if he be called upon to identify a bird from one or two of its fragments only. Every ornithologist is called upon from time to time to determine the species or subspecies under such circumstances. In many cases this presents no real difficulties because some of the fragments may be so characteristic as to preclude the possibility of a mistake; thus the wing of a mockingbird, of a Townsend solitaire, or of a western tanager cannot be mistaken for that of any other bird. This, however, cannot be said of most of the juncos, many sparrows, crows, and snow geese, for example. With species or subspecies having quite similar plumages a diagnosis from fragments alone may be impossible without a large sized skin collection. Thus in such situations the wing measurement might throw the specimen into one subspecies and the tarsal length into another. This actually occurred to me while studying Colorado crows, at which time a cursory search was made in bird literature to ascertain if anyone had tried to discover in, or to give to, the usual bird measurements definite or relative values, which could be used as quantitative aids in diagnosis; but my search uncovered nothing.

It was thereupon decided to attempt to find such valuations, if it were possible with the available data. The method of investigation was substantially as follows: Tables of the minimum, maximum and average of the four mensural characters of a bird were selected for investigation, namely, length of wing, of tail, of tarsus, and of bill. The total length (tip of bill to tip of tail) was not included, as the available data covering this character are taken from skins, data relatively unreliable since the artifacts in the skins due to methods of preparation, etc., give this character an introduced variability. Tables of the minimum, maximum and average of the aforesaid measurements of various species of a single group, such as owls and shore-birds, were compiled. The average as given by Ridgway in his Birds of North and Middle America was taken as the normal or 100. This seems a fairly safe procedure since this average is struck from all the measurements of any series measured, and is not the mean. The percent departures of the minimum and the maximum from the average were then computed and tabulated. The measurements of males only, were utilized because males preponderate in the data recorded by Ridgway, this preponderance giving larger series from which to draw conclusions. Measurement variations in females were studied in a superficial way, through which it became patent that variations of a mensural nature in males were closely paralleled by those in females; hence it was deemed unnecessary to include females in a separate study.

I was unable to study measurement variations in ducks, hawks, and geese, because Ridgway's work has not yet included these groups. I was able, however, through the kind offices of Dr. A. K. Fisher and Dr. Alexander Wetmore, to give some attention to certain terrestrial birds, such as quails and sage-hens, which groups agree substantially with the conclusions reached with the other twenty groups.

TABLE No. 1

Species	Wing length			Tail length			Bill length			Tarsus length		
	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.
Spurred Towhee	83.57	86.11	92.71	90.17	100.33	111.51	12.19	13.46	14.73	26.42	27.69	29.21
Variation (greatest)												
Below average		2.9%			9.1%			9.4%			4.6%	
Above average		7.7%			11.1%			9.4%			5.5%	

Ridgway measured fifty male Spurred Towhees; the *average* wing length of this series was 86.11 millimeters, the shortest wing length was 83.57, and the longest 92.71. From these data it appears that the minimum wing length of these fifty specimens was 2.57 millimeters less than the average, and that the longest wing exceeded the average by 6.60 millimeters, whence one can deduce the fact that the shortest wing departed 2.9% and the longest 7.7% from the average. Table no. 1 illustrates this statement. The measurements of the bill, wing, tarsus and tail as given by Ridgway for two hundred different species of North and Middle American birds were treated in this manner, after which the percent departures were utilized to construct graphs displaying the curves of departures above and below the average. It is not possible, because of the cost, to publish copies of these graphs, nor yet of the tables of departures. A summary of the results can be, and is hereby, given.

The measurement data given by Ridgway and utilized in this study show variations in individuals only in so far as they record the minimum and the maximum, of the characters as they occur in some particular individual of the group; the data do not show if the variations in a given specimen follow similar curves in all four characters. That is to say, it cannot be determined whether or not the variations in measurements of tail, bill or tarsus necessarily follow the curve of the variation in the wing. It might be that a wing varies plus and the other members minus. However, in a manner I was able to answer this question from Ridgway's data concerning Spurred Towhees, for he gives tables of measurements of this species in groups, one including fifteen males, a second ten males, and the third fourteen males. The average wing length of the individuals of these three groups (plus eleven more) taken together (fifty) is 86.11 millimeters, while that of the group of fifteen is 4% longer than the average, .3% longer in the group of ten, and 1.4% longer in the group of fourteen. In the group of fifteen alone the wing is, as said, 4% longer than the average, but the tail is only 3.7% longer than the average, and both bill and tarsus have negligible departure from the average. In the group of fourteen the relations are quite different; the wing, tail and tarsus exhibit departures above the average of 4, 2, and 1% respectively, while the bill is shorter than the average by 2.7%. Also, I have been able to answer this question so far as it applies to some quail, sage-hens, prairie chickens and Bohemian waxwings, and can say that variations in one mensural character are seldom correlated with, or run parallel with, the variations of the other measurable characters.

If it be assumed that the evidence evoked by this method of examination is valid and correct one can say from a casual examination of the data that the wing shows the narrowest range of variation, and the bill and tail the widest.

If one arbitrarily takes ten per cent as the normal limit of variation below and above the average, and tabulates the number of times this limit is exceeded either way, some interesting facts are uncovered. By such a tabulation (table no. 2) we learn that in the two hundred species under review, the wing is but four times above and four times below the limit of variation assumed, yet the bill is fifty-seven times above and fifty-seven times below, and so on. If one adds together the times the measurements go outside this zone (above or below the 10%), with all the species in

the four principal mensural characters, and compares each with each, it is found that the wing is nine and one-half times more valuable than the tail, three and one-half times more valuable than the tarsus and eleven and three-quarters times more valuable than the bill in the use of these characters in deciding closely related subspecies, as well as with more or less similar species.

TABLE No. 2  
Number of departures more than 10% from the average

Groups of species, 20 in each	Number of individuals	Wing	Tail	Bill	Tarsus
Wrens, Titmice, Nuthatches, etc.	395	0	2	13	3
Skimmers, Gulls, Terns, etc.	210	0	18	12	3
Crows, Jays, Blackbirds, etc.	419	2	13	11	3
Goatsuckers, Swallows, etc.	418	2	6	25	4
Woodpeckers, Toucans, etc.	432	1	7	12	2
Finches	743	0	8	14	6
Shore-birds	231	1	8	4	2
Owls	216	1	4	5	*
Tanagers, Wood Warblers	378	1	4	8	3
Thrushes, Thrashers, etc.	395	0	6	10	2
 Total	3,837	8	76	114	28

\* Data not available.

If we take one hundred as the number of points of value to be given to all four characters taken together, and then divide them proportionately according to the above valuation, it can be said that the wing's usefulness is sixty-eight, the tarsus' twenty, the tail's seven, and the bill's only five. Hence I now feel that if I had two crows to identify as to subspecies I would give these values to their measurements, to help me allocate the crows as to subspecies. These valuations make it look as if the wing would decide the question in all cases, as its value is greater than the three others combined; if, however, one other measurement substantiated that of the wing the case would be thereby all the stronger.

It seems to me that the results of this brief study are in line with what one, *a priori*, would assume to exist. It is a common experience to find a bird with a distorted bill, or tarsus, or a missing tarsus, and it is a matter of common observation that a bird may do pretty well without the tail, and despite any or all of these abnormalities may be vigorous and able to maintain its own. But a bird with a broken or disabled wing or a markedly abnormal wing does not survive long.

**SUMMARY:** 1. It is possible that the present method of investigation is not the correct way to solve the problem under consideration; furthermore, it is equally possible that there is no ultimate solution to it. 2. On the assumption that the method employed in this study is correct, the following values may be given to bird measurements: The wing, 68 points; the tarsus, 20 points; the tail, 7 points; and the bill, 5 points.

*Denver, Colorado, December 15, 1924.*

A REPORT ON THE BIRDS OF NORTHWESTERN ALASKA AND  
REGIONS ADJACENT TO BERING STRAIT. PART II

WITH ONE PHOTO

By ALFRED M. BAILEY

**TUFTED PUFFIN. *Lunda cirrhata*.**

The first example of this species to be observed was far out at sea, 1069 miles from Seattle according to the log of the S. S. Victoria, several flocks being seen during the day. They were exceedingly abundant in Unimak Pass on June 15. They were fairly common at King Island on June 27 and at St. Lawrence Island the following day, although there were but few in comparison with the next species. Several birds were seen at Whale Island, near St. Michael, in company with the Horned Puffins, while others were observed at the Corwin coal mine off Cape Lisborne on August 3. We had no opportunity to visit the great colonies of sea birds nesting along the precipitous walls of Cape Lisborne, but from the number of Tufted Puffins seen at sea, there must be quite a colony of them breeding there. Hende saw no birds of this species in the vicinity of Wainwright. In Bering Strait, off-shore from Cape Prince of Wales, they were exceedingly abundant after June 16, on which date the first birds were seen along the broken shore ice. Great numbers nest on Fairway Rock and the Diomede Islands. They had not begun nesting on June 25, the last time I visited these islands, but were inhabiting the tunnels on the grassy slopes. I believe they re-excavate their old burrows.

**HORNED PUFFIN. *Fratercula corniculata*.**

These puffins were very abundant at King and St. Lawrence islands on June 27 and 28, doubtless then beginning to lay, but our time was too limited to make any investigations along that line. They seemed to favor the very summit of King Island, which is crowned with boulders, in the crevices of which the birds deposit their eggs. When a shot was fired, flocks of the birds took wing and the whole summit of the island was surrounded by them. They were even more abundant at St. Lawrence Island along the cliffs on the north side, and in the colonies on the southwest near Gambel village. They were also fairly abundant along the cliffs of Providence Bay, Siberia. We collected a series of specimens at Whale Island near St. Michael on July 21; they were nesting there rather abundantly along the sea wall facing the open bay. Three nests were found, in typical sites for this species, far back in deep crannies, and many birds were seen to fly from places which were inaccessible to us. A small flock of about seven individuals was seen at Cape Blossom, probably from the breeding colony on Chamisso Island a few miles away, and several birds were noted in the vicinity of Cape Lisborne and Corwin coal mine on August 3. I was told that they nested abundantly along the cliffs of Cape Lisborne. The species does not range regularly north of there. On Bering Strait it proved a common bird, a number being seen in migration along the open leads on June 16, off-shore from Cape Prince of Wales. It is not as abundant on Fairway Rock as the preceding species, although great numbers nest on the cliffs, usually choosing deep crannies for their sites. They had not begun nesting on June 25 on the Bering Strait islands.

**PAROQUET AUKLET. *Phaleris psittacula*.**

We arrived off King Island on June 27, a rather blustery day and poor for observations in the early morning; but a great number of sea birds were passing back and forth and among them we recognized many bands of these little white-breasted auklets.

When flying close, and silhouetted against the sky, their red, upturned beaks are prominent. The natives told us the birds had not all arrived and were not breeding as yet. We climbed about the ledges in the little time allowed us ashore, and saw a goodly number, the most favorable place near the village being among the jagged boulders on the summit and in the main colony of auklets situated some distance away.

There is a large nesting colony of sea birds below Gambel village on the southwest side of St. Lawrence Island, which Hendee visited, and he reported a number of this species (as well as of the next two) which were nesting, or preparing to nest, among

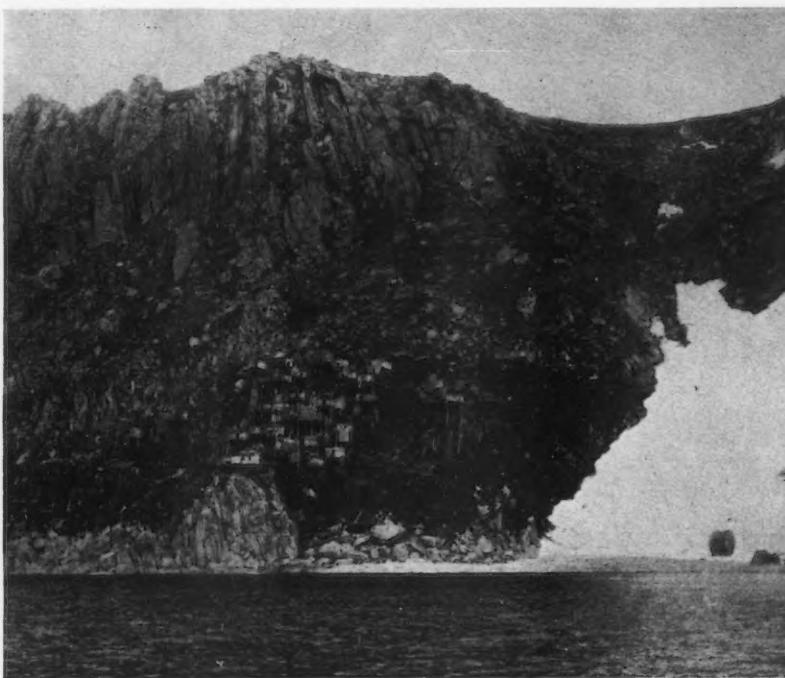


Fig. 19. KING ISLAND, IN BERING SEA. AUKLETS AND PUFFINS NESTED IN THE LEDGES ABOVE THE CLUSTER OF HOUSES.

the gigantic boulders. Some of these rocks were very large, and piled together in such a way as to form caverns into which one could crawl for a considerable distance. The scolding notes of the auklets were heard on all sides, far back where their nests were absolutely inaccessible to us. I visited a fine colony of birds near the reindeer herding camps of Sivunga, on the north shore of St. Lawrence Island, about sixty miles from Gambel. The cliffs rise from deep water to a sheer height of from seventy-five to one hundred feet, and are walled with snow for great distances, the free places being used by cormorants, murres, kittiwakes, and puffins, as nesting sites, while this species of auklet seemed to prefer burrows near the top of the cliff where they could not be molested. The Paroquet Auklets were quite tame and often peered inquisi-

tively at us, even after the murres, cormorants, and other auklets had taken wing.

We did not note these birds north of Bering Strait, but the Eskimos along the Arctic coast claim to know them. On the Diomedes and Fairway Rock they nest in very great numbers, but not until July. The first birds were seen off-shore from Wales on May 22, flying along the drifting pack, and by June 3 they were noted in considerable numbers around their breeding places. While hunting walrus with the Eskimos we continually saw these little fellows in equal abundance with the next species. On Fairway Rock, June 25, I took a few specimens. They were very tame, sitting about on the jutting boulders or flushing from the crevices among the rocks.

**CRESTED AUKLET. *Aethia cristatella*.**

These are the most beautiful of the northern auklets, and to me, at least, the most interesting. They have been aptly called sea-quail, because of the graceful, recurved plumes of the forehead, an adornment which makes an otherwise drab-appearing little bird conspicuous. They were abundant at King Island on June 27, but not as plentiful as I had expected, doubtless because we did not visit the most favorable place. The natives brought off a string for the captain's mess, and, I must confess, there may be a reason other than their appearance for calling them "sea-quail". In flight, they are easily distinguished from the Paroquet Auklets by their uniform, slaty plumage, as contrasted with the white-bellied Paroquets. The Least Auklet is also white-breasted, but too small to be confused with either of the other birds.

At St. Lawrence Island, these birds were present with the other auklets in both the colonies mentioned above. The summits of the cliffs were lined with a confused jumble of boulders among which this species and the Least Auklets made their homes. I spent a few enjoyable hours watching the active little fellows, but of all the auklets the Crested were my favorites. They struck such grotesque poses, standing duck-like, or strutting back and forth, with neck outstretched and head twisted inquisitively. They were quarrelsome when in company with others, and the dispute invariably started ended in all the contestants rolling among the boulders.

The Crested Auklet seemed to arrive at Bering Strait a little later than the Paroquet Auklet, the first bird seen in 1922 being on May 23, with but very few arrivals after that date until well into June. By June 25, however, they were as abundant as the former species. This is the auklet usually caught by the natives of the Diomedes for food, and when boats call at the island, strings of them are brought aboard for trade.

**LEAST AUKLET. *Aethia pusilla*.**

This is the most abundant of the auklets. It was noted at King Island in considerable numbers, flocks of them working close to the "Bear", while individuals and pairs were observed on the face of the cliffs. At St. Lawrence Island we saw thousands of them in the breeding colony at Sivunga, where they were preparing to nest among the rocks and rounded boulders. It was a wonderfully picturesque colony, with an immense snow-bank along the sea wall, inaccessible cliffs and dark-colored rocks which were relieved by the greenish moss, the bright beaked auklets and puffins, and the sun-lit clouds on the horizon. The auklets were in such flocks that they looked more like swarming bees than birds, and when they alighted, a dozen or more would often be perched upon a single boulder. That night, as we headed toward East Cape, Siberia, thousands of this species were continually flushing ahead of the "Bear", only to alight again a short distance ahead.

These birds are caught in great numbers by the natives, by means of dip nets which are suddenly thrust in the air from a place of concealment as a flock darts by close to the boulders. They are used for both food and clothing, the breast skins being

carefully removed and degreased and then sewed together into "parkas". Many of the natives were clothed in these bird-skin shirts.

In 1922, a few Least Auklets were seen in the drift ice at Wales on May 22, and by June 3 they were abundant. Early in the morning of the latter date we were sailing along under the walls of the Little Diomede, keeping watch for walrus herds, when countless numbers of auklets were continually flushing before our oomiak. They were feeding in pairs at this time, and as they flushed they gave timid cries of alarm. They seem to feed early in the morning and late in the evening, at which times great lines of them were moving to and from the nesting places. In the middle of the day, we often saw enormous "rafts" of birds floating about in the openings among the ice cakes, literally thousands of them in a band.

**MARBLED MURRELET.** *Brachyramphus marmoratus.*

Only one specimen of this species was secured, an adult male collected by Hendee at Unalaska on September 24, 1922.

**KITTLITZ MURRELET.** *Brachyramphus brevirostris.*

This bird seems to be a species of the ice floes. Hendee extended their known range along the Alaskan coast far into the Arctic, by taking two specimens on June 9 in a lead in the ice-pack off-shore from Wainwright. The natives there call them "ig-ir-ook", although some of the old-timers claim never to have seen them before. It is possible they confuse these birds with the auklets which are said occasionally to wander northward.

On April 28 I took one in the winter plumage at Cape Prince of Wales. It was feeding along the broken shore ice, and the next day I saw two others, of which I secured one in the typical spring plumage. The Wales natives called it "ey-ah-azruk" and said the birds nested on Wales Mountain, but I did not see a bird after the above date on the American side of Bering Strait. On June 3 when we were drifting with the pack ice along the Siberian shore near East Cape, two of these murrelets were flushed. They uttered alarm notes similar to those of baby chicks.

**MANDT GUILLEMOT.** *Cephus mandti.*

This species is irregular in its appearance in the vicinity of Wainwright but, according to the natives, is rather common all winter in the open leads far off-shore. A few pairs are usually seen daily when one is seal hunting. The natives gravely informed me that these birds live under the ice when the leads close, as do the seals! The first birds make their appearance when the old ice comes in, in the fall, according to Allen, although we did not make an observation until January 6, when a pair of birds in winter dress was seen. Natives reported a few in the off-shore leads during the latter part of January, but it was not until March 31 that Hendee secured a specimen. This was nearly white except for the dark wings, but was already beginning to assume its spring plumage. Another specimen, slightly darker, was taken on April 17, and two others were observed on May 7 and May 10. Two birds were collected on May 25 and one on June 1.

At Wales I found this species to be numerous as soon as the leads opened in the spring and they doubtless occur much farther south during the winter months. I collected a female in winter plumage on April 28, and a number of others were seen. At this time Bering Strait is choked with ice, great ice fields crushing back and forth with the changing currents; and violent winds are of daily occurrence, so that it is only occasionally that specimens can be secured. I hunted along the edge of the shore ice, and only when on-shore winds blew was it possible to recover specimens by the

use of the "nixik" line (a native contrivance) from the top of the fifteen-foot ice wall. These birds were seen throughout May and one specimen was killed on May 23 which the wind carried away off-shore before I could secure it. On May 29 a few were seen in the drift ice.

**PIGEON GUILLEMOT. *Cephus columba*.**

These graceful little divers are common about the islands of Bering Sea and are to be found nesting in practically all places where auklets occur and in a good many where they do not. A few were observed at King Island June 27; and at St. Lawrence Island they were abundant, nesting along the cliffs near Sivunga and below Gambel. They were common at Emma Harbor, Siberia, a nest with two eggs being located in a cavern which was almost completely blocked with snow, the nesting site appearing more like a refrigerating plant than a place in which to rear young birds. A few were seen at Whalen, near East Cape, July 11, and several at Teller, July 29. They were not positively identified in Bering Strait the following spring until June 3, when a number were seen along the Diomedes. They were very abundant there during the nesting season and a few birds were noted along the walls of Cape Prince of Wales during the latter part of June.

**CALIFORNIA MURRE. *Uria troille californica*.**

No specimens of this species were taken in 1921, so positive records for its occurrence can not be given; it is so similar to the next species that sight records from a ship are impossible. No large colonies of murres were breeding during our cruise in Bering Sea, but from the number of California Murres known to breed near Unimak Pass and at the Pribilof Islands, many of the thousands of murres seen there on June 15 and 16 were doubtless of this species. As the "Victoria" roused up the flocks of feeding birds, they rose against the wind, pattering away over the water in the manner so characteristic of murres, and headed away in the direction of the Pribilofs.

Specimens which had not yet assumed their spring plumage were collected in May at Cape Prince of Wales from large flocks of Pallas Murres, as well as occasional single specimens shot along the shore ice. No adults were identified on the Diomedes.

**PALLAS MURRE. *Uria lomvia arra*.**

The great colonies of Pallas Murres throughout the islands of Bering Sea have been so well known and described, especially about the entrance to Unimak Pass, on the Pribilof and St. Lawrence islands, as to make further notice almost superfluous. This species was in abundance in the waters adjacent to the breeding islands, as we steamed by about the middle of June, and they were noted in numbers at King Island on June 27. During the week of July 1 to 8, Hendee reports them as extremely numerous on St. Lawrence Island, where they were just beginning to nest. Ravens and kittiwakes were seen to fly off with their eggs. In the evening we saw great strings of them returning to their nesting ledges, whence they had straggled during the day. A few murres were seen daily between the 1st and 7th of July at Emma Harbor, and the natives told me they nested in a great colony on the southward entrance to Providence Bay. Countless numbers nest on the Diomedes and on the bluffs of Cape Lisborne, the latter being well above the Arctic Circle.

In the spring of 1922 Hendee saw them flying northward over the ice at Wainwright in flocks of hundreds, on May 9 and 10, there being no lead of open water at that time, only small holes. The flight continued for several days, whenever the wind was from the south, or when it was calm. Some southward flights occurred, but only a small percentage of those seen going north. At Cape Prince of Wales, the first

specimen, one in winter plumage, was observed on April 28. By the 8th of May they were extremely common in their northward migration, and I collected a good series of birds at this time. They flew in compact flocks at great speed, sometimes high in the air, or again dropping low over the water. Invariably they skirted the edge of the pack along the open lead, keeping well to the seaward side. Great numbers are taken by the natives for food. On the Diomedes on June 3 I found them abundant, the faces of the cliffs seeming alive with them and the air filled with darting birds. They did not begin to nest until the latter part of June, only one egg being seen on Fairway Rock on June 25.

*Denver, Colorado, January 12, 1925.*

THE TIMBERLINE SPARROW  
A NEW SPECIES FROM NORTHWESTERN CANADA

By HARRY S. SWARTH and ALLAN BROOKS

(Contribution no. 442 from the Museum of Vertebrate Zoology of the University of California)

DURING the summer of 1924 the two authors of the present paper were collecting birds together in the Atlin region, in the extreme northwestern corner of British Columbia. One of the most interesting of our finds was the discovery, in the higher parts of the mountains of that region, of a *Spizella* apparently distinct from any other known species. This bird is closely similar to *Spizella breweri* in general appearance, but it differs appreciably from *breweri* in details of structure and coloration. This northern *Spizella* we propose to name

*Spizella taverneri*<sup>\*</sup>, new species  
Timberline Sparrow

TYPE.—Male adult; Museum of Vertebrate Zoology, no. 44856; Spruce Mountain, at 5000 feet altitude, 10 miles east of Atlin, British Columbia; August 8, 1924; collected by H. S. Swarth; original no. 13048.

DIAGNOSIS.—Most nearly like *Spizella breweri*. Slightly larger, with (usually) rather longer tail, and with weaker, more slender bill. Coloration darker than in *breweri*, with heavier streaking on top of head and back, darker flanks, and a tendency toward the development of narrow streaks on breast and flanks. Bill and feet darker than in *breweri*: "bill black at tip; upper mandible brownish, lower mandible flesh; feet pale drab, tarsus brownish flesh" (Brooks' field notes).

SPECIMENS EXAMINED.—Adult male, 3; adult female, 4; immature, first winter plumage, 4; juvenal, 6; molting from juvenal to first winter, 6. Total, 23.

It seems best to accord this form specific standing, rather than to regard it as a subspecies of *breweri*. The characters of *taverneri* seem constant. At any rate, in the series at hand there is none that could be confused with *breweri*, and in extensive series of *breweri* (numbering some hundreds of skins, from many localities) we have found no specimen of equivocal character. The difference in bill alone seems diagnostic. This member is slender and dark colored in *taverneri*, relatively stubby and pale colored in *breweri*. In the dried skin this feature is retained to its full extent, so that the darker bill of a specimen of *taverneri* appears in strong contrast to that of any *breweri* with which it is compared.

\* Named for P. A. Taverner, Ornithologist, Canadian Geological Survey, Ottawa, Canada.

In dorsal coloration *breweri*, in all plumages, presents a ground color of sandy buff, with narrow streakings. In *taverneri* there is none of this pale sandy appearance. The general ground color is grayish, with the limited brownish areas of individual feathers of a darker shade than in *breweri*. In coarser dorsal streakings, in the fairly well defined grayish area between streakings of head and back, in the suggestion of a median line upon the crown, and in the fairly distinct superciliary stripe, *taverneri* shows an approach toward the characters of *Spizella pallida*.

In juvenal plumage, *taverneri* and *breweri* present differences comparable to what is seen in adults, young *taverneri* being darker colored generally, and more heavily streaked. In later plumages there is in *taverneri* a tendency toward the development of narrow streaks on breast and sides to a far greater extent than is ever seen in *breweri*. This is most noticeable in certain immatures in first-winter plumage (but these streaked feathers are not left-overs of the juvenal plumage), and it appears also to some extent in freshly molted adults.

In a study of the relationship of *taverneri* and *breweri*, account must be taken of the geographical ranges of the two forms. *Breweri* finds its center of abundance in the Great Basin region. It is an inhabitant of arid portions of the Upper Sonoran and Transition zones, a desert bird, that, as a rule, follows the sage-brush in its distribution. It extends northward along the lower valleys of the interior of southern British Columbia, as far as the sage-brush goes. *Taverneri* is an inhabitant of the Alpine-Arctic zone on mountain tops far to the northward of the known range of *breweri*. We found it only above the limit of upright timber. It occupies a higher zone in the Atlin region than do the Western Tree Sparrow and the Willow Ptarmigan; it is associated rather with the Golden-crowned Sparrow and the Rock Ptarmigan. While it would not be safe to say that *taverneri* occurs nowhere in the 800 miles to be traversed to the southward before the nearest record station of *breweri* is reached, still parts of that region have been visited by various collectors who have failed to find either species there.

There seem to be some notable differences in actions. *Breweri* is essentially a retiring and unobtrusive species, though not particularly wild. *Taverneri*, on the other hand, is extremely wary, and is frequently seen, apparently on the lookout, on the tops of the stunted trees of its timberline home. On two occasions, pairs of birds, presumably near their nests, were seen perched on the tallest bushes, jerking their tails in a manner seen in no other *Spizella* except *monticola*. On the whole, considering the differences in geographical distribution and the differences in zonal distribution, coupled with the physical characteristics of the two forms, it seems logical to regard *breweri* and *taverneri* as distinct species.

The Timberline Sparrow is, of course, a summer visitant only, in the Atlin region. It must spend the winter far to the southward, and it seems likely that the line of migration lies to the eastward of the Rocky Mountains, as is the case with so many non-resident birds of the region. Its winter home, however, is as yet unknown. We are indebted to Dr. Joseph Grinnell for making comparisons of specimens of *taverneri* with series of *breweri* in the collections of the United States National Museum, including that of the Biological Survey. He failed to find a single example of *taverneri* in those collections. It seems likely, though, that winter specimens must have been collected somewhere, and it would be advisable to subject series of *breweri*, wherever available, to close scrutiny on the chance of finding examples of *taverneri* from southern record stations.

MEASUREMENTS IN MILLIMETERS (AVERAGE, MINIMUM AND MAXIMUM) OF  
*SPIZELLA BREWERI* AND *SPIZELLA TAVERNERI*

	Wing	Tail	Culmen	Tarsus	Middle toe with claw
<i>Spizella breweri</i> 10 males <sup>1</sup>	61.8 (60.5-64.5)	61.0 (58.5-67.0)	8.2 (8.0-8.5)	17.2 (16.6-18.0)	14.8 (13.5-15.5)
<i>Spizella taverneri</i> 6 males	64.1 (61.5-66.2)	65.1 (62.5-68.0)	7.8 (7.0-8.5)	17.3 (17.0-18.0)	15.5 (15.0-16.0)
<i>Spizella breweri</i> 10 females <sup>1</sup>	59.2 (57.5-60.0)	58.7 (57.5-60.0)	8.4 (8.0-8.8)	17.1 (16.2-17.5)	15.2 (14.5-16.0)
<i>Spizella taverneri</i> 3 females	60.7 (60.0-62.0)	59.5 (57.0-62.0)	8.2 (8.0-8.5)	17.6 (17.0-18.0)	15.7 (15.0-16.5)

<sup>1</sup> Breeding birds, from Humboldt County, Nevada.

WEIGHTS IN GRAMS (AVERAGE, MINIMUM AND MAXIMUM) OF  
*SPIZELLA BREWERI* AND *SPIZELLA TAVERNERI*

	<i>Spizella breweri</i>	<i>Spizella taverneri</i>
10 males	10.6 (9.8-11.5)	6 males 12.3 (10.0-14.0)
5 females	10.6 (9.3-11.8)	2 females 12.3 (11.5-13.0)

Berkeley, California, January 26, 1925.

## FROM FIELD AND STUDY

Western Evening Grosbeak at Diablo, California.—Visits of Western Evening Grosbeaks to this section of the state are events of such rare occurrence that I feel it is worth while to report the recent presence of these beautiful birds in the park of the Diablo Country Club, which is located at the southwestern base of Mount Diablo. On the morning of December 18 just passed, while engaged at my desk, my attention was attracted by a small flock of birds that suddenly appeared in a leafless tree-top but little more than twenty feet away. A glance told me they were birds that I had never seen here before. What were they? Strange visitors surely! While studying their striking colors and beautiful markings, and raking my puzzled brain for a clue to their relationship, I finally noticed those heavy mandibles—the grosbeaks'. The rest was simple, for only two or three evenings before, I had casually picked up a bird book and happened to open it at a colored plate picturing the Western Evening Grosbeak (*Hesperiphona vespertina californica*). I was at once interested and read the accompanying text, wondering why I had never encountered a representative of the showy tribe, and wishing I could see one. Now the birds themselves came and seemed to say, "You wanted to see us! Here we are!"

The surprise and curiosity of the resident birds was aroused by the advent of the strangers. A number of them gathered around the vicinity and ogled the visitors, you might say almost impudently. This was particularly true of some California Woodpeckers, which followed the grosbeaks around like boys chasing a band wagon. I fully expected that the woodpeckers would attack the visitors, but beyond an exhibition of excessive curiosity they were not uncivil to them.

The grosbeaks were not seen by me again, but a lady residing in the Club grounds told me, two days after, of having a "flock of the most beautiful birds" she had ever seen, in her front yard. She gave a fair description of them, from which I gathered that the birds she saw were the grosbeaks that so kindly "called on me" the few days before.—FRANK A. LEACH, *Diablo, California, January 6, 1925.*

**The Black Swift in Oregon.**—On September 22, 1924, Mr. E. A. Collier sent us for identification a Northern Black Swift (*Cypseloides niger borealis*) which had been found dead at Albany, Oregon, on September 20. Because of the deteriorated condition the sex was not determined, but a skin was made by Mr. W. D. Courtney and is now in the bird collection of the Department of Zoology and Physiology at the Oregon Agricultural College.

The Annotated List of "The Birds of Oregon" by A. R. Woodcock, 1902, reports six swifts seen at Cape Foulweather, September, 1898, which were taken for Black Swifts. Eliot in "The Birds of the Pacific Coast" lists the Black Swift as found in Oregon, and Dawson gives its breeding range as from southern Alaska to central Mexico. This, however, is the first instance of which the writer is aware, of a Northern Black Swift taken in Oregon.—FLORENCE HAGUE, *Corvallis, Oregon, January 6, 1925.*

**A Combative Crane.**—An episode in connection with the killing of a Sand-hill Crane (*Grus mexicana*) for the Museum of Vertebrate Zoology, may be of some general interest. With one companion, Sam Lamme, I was duck shooting in a blind in Butte Creek Basin, Sacramento Valley. There was no wind and the dead ducks were floating among and outside of the decoys. The crane was a long, high shot. I was lucky in breaking his wing and he came tumbling down, striking outside of the decoys with a tremendous splash. He promptly righted himself and looked up. We both thought that seeing us, for we were in plain sight, he would hurry away to the opposite side of the pond, and Sam was getting ready to go after him in the boat when I called him back. The crane plainly saw us, but nearer to him and in our direction was a dead duck. He walked up to it and began stabbing it furiously with his bill. Leaving that behind him he did the same to another and then, apparently catching sight of the decoys for the first time, he stalked swiftly toward them with the apparent design of wreaking vengeance upon them as the source of his trouble. He was utterly indifferent to our presence, a curious combination of reckless ferocity and poor judgment. He thus came forward toward the decoys until he was in easy range.—F. W. HENSHAW, *San Francisco, California, December 17, 1924.*

**Harlequin Ducks in Madera County, California.**—On August 4, 1924, while fishing at Lake Ediza, 9300 feet altitude, under Mount Ritter, Madera County, California, I noticed a pair of ducks and six little ones at some distance from me. I was uncertain what kind of ducks they were, so I asked a prospector, who lived near-by, what he thought they were. He informed me that they were "black wood ducks" and that he had spent his summers at Lake Ediza for thirty years and that they (one or two pairs) had been there every summer since he first visited the region. He said that there was a fine for killing them and that he would have anyone arrested who molested them.

I spent six days at the lake and watched these ducks at every opportunity. There was one, looking black at a distance, that I thought was a male, and two female birds; also one flock of five, and one of six small young.

Only once did I see the male bird with the others; the rest of the time he kept by himself. The young birds were about a week old and every noon would come out on the rocks around the lake to sun themselves. One morning I found a mother bird and five young up a small, swift stream which entered the lake. I tried to head them off and raced with them toward the lake. The mother bird reached the lake and the

young ones hid between some willow roots on the bank of the stream. I went some distance away and watched. As soon as they thought I had gone they swam out onto the lake and joined the mother bird.

I took one of the young birds as a specimen and later identified it at the Museum of Vertebrate Zoology, as a Harlequin Duck (*Histrionicus histrionicus*). I believe this constitutes a new southern breeding record for this species of duck.—WILLARD F. GRINNELL, *Berkeley, California, January 8, 1925.*

**Goldfinches' Manner of Drinking.**—A curious psychological difference between the Green-backed and Lawrence goldfinches, which are nearly identical in habits and often flock together while feeding, is seen when a choice of different sources of water supply is offered. The Green-backed Goldfinch (*Astragalinus psaltria*) always prefers to drink from a dripping faucet or from running water, with the bird-bath as a last resort. I do not recall ever having seen a Lawrence Goldfinch (*Astragalinus lawrencei*)



Fig. 20. LAWRENCE GOLDFINCH BESIDE POOL. AZUSA, CALIFORNIA;  
JUNE 19, 1924.

drinking from a faucet, but it makes its visits to a quiet pool or basin. This difference may not be true of all localities, but I have noticed it for a number of years at Azusa, where both species are abundant during the spring and early summer months. The Willow Goldfinch, which is less common, shares the Green-back's preference.—ROBERT S. WOODS, *Los Angeles, California, September 27, 1924.*

**Food of the Harris Hawk.**—My own impression of the Harris Hawk (*Parabuteo unicinctus harrisi*), confessedly from other than observational sources, has for some time been rather uncomplimentary to the species, so far as food habit is concerned. Coues, in his "Key", gives the impression of a sluggish hawk of questionable food habits. The bird was supposed to have a rather long and rather slender tarsus, which would give the impression of reduced raptorial habit. This reputed tarsal character has made the species one of the urgent desiderata in my own studies of the Rancho La Brea fossils, but it has successfully eluded me for a decade or more.

A field trip taken to the Pot-holes region of California during the closing week of 1924 brought an opportunity to study this hawk and resulted in two stomach examinations. At least five individuals were observed in life and they proved quite alert and very wary. One that was seen by A. J. van Rossem and Alden Miller at Yuma, dashed actively at a Ferruginous Rough-leg in an attempt to drive it from the neigh-

borhood. Duck hunters about a shallow lake in the Colorado River bottom referred to the species as "the big black hawk that catches ducks", and this impression seemed quite firmly grounded in their minds. For this reason stomach examination was attended with considerable interest. The first, a male, contained feathers and bones of a Green-winged Teal. The second, a female, had the stomach filled with feathers and bird bones, among which were the entire foot and tarsus with part of the tibia of a Gilded Flicker. This latter species was, at this season and locality, very shy, and kept pretty well to the thick timber, so that the hawk must have employed a considerable measure of agility and speed to capture it. Such ability is scarcely liable to lie dormant, so the Harris Hawk may properly be considered as an appreciable factor in the limitation of the bird population in the Colorado River area of California.—LOYE MILLER, *University of California, Southern Branch, Los Angeles, January 12, 1925.*

**Unpublished San Diego Records.**—While cataloging the Frank Stephens collection of birds and mammals, which was presented by him to the Natural History Museum, San Diego, I have found the following specimens, not hitherto recorded, which appear worthy of notice.

**Ashy Petrel** (*Oceanodroma homochroa*): no. 2566, Natural History Museum Collection; male; taken April 20, 1916, by Frank Stephens on the Coronado Islands, Mexico; incubating one egg. I sent this specimen to Mr. H. S. Swarth, who in turn submitted it to Mr. Leverett M. Loomis, and both identified the bird as *Oceanodroma homochroa*. This is the most southern breeding station of this species yet recorded. Another specimen of *O. homochroa*, and so labeled, no. 2149, female, was picked up by Mr. Stephens on the beach south of Coronado after a storm, May 2, 1915. This specimen, interesting from the fact that it was found this far south so late in the season, tends further to establish *O. homochroa* as a breeder on the Coronado Islands.

**Monterey Hermit Thrush** (*Hylocichla guttata slevini*): no. 1701, Natural History Museum Collection; male; taken by Frank Stephens April 4, 1877, at Campo, San Diego County, California. There appear to be no specific migration records of this species for this region.—LAURENCE M. HUEY, *Natural History Museum, San Diego, California, November 21, 1924.*

**Bird Notes from Wheatland, Wyoming.**—In carefully noting the remarks of the authors of the two publications put out by the University of Wyoming on Wyoming birds ("Birds of Wyoming" by W. C. Knight, and "Birds of Wyoming" by Grave and Walker), I find certain species of rather common occurrence in this section that are not mentioned as such in these bulletins. The increase possibly is due to the extension of irrigation and farming in this section. Knight puts the Virginia Rail (*Rallus virginianus*) in his hypothetical list, and Grave and Walker note it as an uncommon resident. This rail is common on the Wheatland Flats in practically every marsh that is wet enough to grow cat-tails, cress, and marsh grasses. One fact noted in its nesting that differentiates it from the Sora (*Porzana carolina*) is that it builds its nest exclusively in thick bunches of marsh grass over shallow water, while the Sora builds in the rushes over water at least six inches to two feet deep. The Virginia Rail seems to be about twice as common a bird as the Sora. In a marsh about four acres in extent, beside the Colorado and Southern Railroad, two miles north of Wheatland, I found on May 14, 1924, six Virginia Rail nests, as follows: one with eleven eggs, one with nine eggs, two with eight eggs, one with seven eggs, and one with three eggs. On the nest containing the eleven eggs I was successful in catching the female with my hands before she left. These rails are much slower to flush than the Sora, which I rarely find on the nest at first discovery. In addition to the above six Virginia Rail nests, I found three Sora Rail nests as follows: one with eleven eggs, one with nine eggs, and one with three eggs. The Sora is mentioned by Knight as a possible breeder. Grave and Walker found only one man (Metz, of Sheridan) who reported it as a common summer resident. I have but one record from so high an altitude as the Laramie Plains. June 10, while hunting for Wilson Phalarope nests back of the Wheatland Reservoir, we flushed a Sora from a bunch of grass in a marsh, and from her actions judged she had a nest or young, but careful search disclosed neither. In and about the Wheatland Flats, elevation 4700 feet, wherever marshes occur I find the Sora and Virginia rails in about the same proportion as in the instance cited.

Then, as regards the Bronzed Grackle (*Quiscalus quiscula aeneus*): This bird is mentioned by Knight as a summer resident but not common. Grave and Walker state that only two observers reported it since 1902: Metz, of Sheridan, reports it a common summer resident, and Peabody, as occasionally nesting in Crook County. This bird I would list as a common summer resident in the Wheatland district, especially on the river bottoms, where every available old woodpecker hole and natural hole in trees along the Chugwater and certain portions of the Laramie contain their Robin-like nests. The birds nested this summer in the heart of Wheatland in a row of cottonwoods on one of the main streets of town. During the entire summer the birds can be seen in and about the town.

The Bob-white (*Colinus virginianus*) has extended its range to within three miles of Wheatland on Chugwater Creek. It is not uncommon to jump small coveys from the thick growth along this stream, from a point due east of Wheatland to the Laramie River, but they have not extended their range as yet up the Laramie west of the junction with Chugwater Creek.

Dickcissels (*Spiza americana*) are common on the eastern side of the Flats. I tried hard this last summer to find nests, in order to definitely establish a breeding record, but I was unsuccessful. The same is true of the Wilson Snipe, a bird which I believe to be resident here. I have seen it in every month of the year, and commonly from April 1 to late December.

The White-throated Swift (*Aeronautus melanoleucus*) is a bird noted by Knight chiefly from the northern portion of the state, and by Grave and Walker in the northern and northwestern parts. It is a common breeder on the chalk cliffs of the Goshen Hole Rim, twenty miles east of Wheatland, and is a fairly common breeder in the deeper canyons of the Laramie Hills, west of Wheatland.

Another record of interest, which I secured June 22, 1924, is of the Blue Jay (*Cyanocitta cristata*), noted on the Slater Flats at a point twenty-three miles southeast of Wheatland. The bird was on a fence-post and let me approach to within ten steps of it before flying. I am sure of my identification, though I could not collect the bird, as the Blue Jay was one of my earliest bird acquaintances in Nebraska and I have known it for years in Pennsylvania.

A common nesting bird in the plum thickets of the North Laramie River from 6000 to 7000 feet is the Lazuli Bunting (*Passerina amoena*) and it is also an occasional nester along Chugwater Creek and the Laramie River east of Wheatland. It is mentioned by Knight as "a probable summer resident but there are no breeding records; not common"; and by Grave and Walker as "while not common, apparently more abundant than formerly." Metz, Richard, and Blackwelder note it as a common summer resident in the northern part of the state, but none of the records seem to be for the southeastern portion of Wyoming.—JAMES A. NEILSON, *Wheatland, Wyoming*, December 5, 1924.

**Notes from Spokane.**—Barn Owl (*Tyto alba pratincola*). Placed on the hypothetical list of birds of the state by Dawson and Bowles (*The Birds of Washington*, 1908, p. 974), but since determined to be a sporadic visitor along the southern border of the state. I am informed by Withers Brothers, taxidermists of Spokane, that they mounted one last spring. I now have a letter from Fred Reiff, of Chinook, Washington, saying that he shot the bird near there April 30, 1924. Chinook is opposite Astoria, Oregon.

White-faced Glossy Ibis (*Plegadis guarauna*). Also on the hypothetical list in 1908, but reported from Oregon and British Columbia. Withers Brothers state that they mounted two of these birds in 1909. On looking through their old files I find one bird came from Sand Point, Idaho, October 23. The other was brought in October 30 by a Spokane man who stated that he shot it "up the valley". As Spokane is some twenty miles "down the valley" from the Idaho line, it is likely that this bird was taken in Washington. I am now trying to locate these specimens.

Old-squaw (*Harelda hyemalis*). Reported as common on Puget Sound twenty years ago by Dawson, but not mentioned from eastern Washington. Six were seen November 21, 1924, by W. H. Ransom, Federal Game Warden, and one female taken. It was mounted and is now in the Public Museum here.

Pacific Golden Plover (*Pluvialis dominica fulva*). Considered a rare migrant east of the Cascades in Washington. One shot from a flock of four at Lake Chactolet, near

Coeur d'Alene, Idaho, October 1, 1923, and another shot December 19, 1924, at Kahlotus, Franklin County, Washington. At the latter place, a dozen were seen early in October, 1924. These records are all reported by Mr. Ransom.

Great Gray Owl (*Scotiapex nebulosa*). One shot near Spokane September 23, 1922, and now mounted in the museum here. Withers Brothers said: "We have only seen eight or ten in the last thirty-five years here."

Whistling Swan (*Cygnus columbianus*). A dozen or more swans seen near Pasco and Yakima in November, and several shot before hunters could be warned. Ranchers called them "Arctic Geese".

Canyon Wren (*Catherpes mexicanus conspersus*). We saw one May 22, 1920, at a ranch house six miles north of Spokane. I believe this is the farthest north record for Washington.

Bobolink (*Dolichonyx oryzivorus*). Has never heretofore been authentically reported from this state, although there are records from all around us: Oregon, British Columbia, and the Flathead and Bitterroot valleys, Montana. A few were seen near Newman Lake, Washington, fifteen miles northeast of Spokane, in 1921, by members of the Spokane Bird Club. Mr. T. A. Bonser, curator of the museum, saw a male near the town of Tiger, north of Spokane, on July 6, 1924. Mr. W. L. Breuhman, who has an orchard ten miles east of Spokane, saw several Bobolinks in June, 1922, and heard them sing. He recalled the song instantly, as similar to those heard in Ohio many years ago.—J. L. SLOANAKER, Spokane, Washington, January 21, 1925.

Some Colorado and Wyoming Records of the Varied Thrush and the Rusty Blackbird.—In THE CONDOR (xxii, 1920, p. 75) is a record of a supposed immature Varied Thrush (*Ixoreus naevius naevius* or *I. n. meruloides*), taken November 9, 1919, near Barnum, Wyoming, by L. R. Condit. Upon reexamination, this skin, which is in the University of Colorado Museum, proves to be a Rusty Blackbird (*Euphagus carolinus*). Dr. Bergtold, of Denver, Dr. Harry C. Oberholser, of the United States Biological Survey, and Ralph Hubbard, now of Colorado Springs, all familiar with the plumage phases of this species, have examined the skin at the Museum and agree as to its identity.

As a Wyoming record, this is almost as interesting as though it were really a Varied Thrush. The first Wyoming record of the Rusty Blackbird is by Dr. Brewer (Proc. Boston Soc. Nat. Hist., xv, 1872, p. 193, etc.), submitting data obtained from Holden and Aiken. He quotes one of them (doubtless Holden, as he was the one who collected in Wyoming) thus:

"The character of the region of Sherman, which is 8,000 feet above the sea level, is dreary in the extreme. It consists of several level plateaus, interspersed with canyons and meadows. I found no birds plentiful with the exception of the Rusty Blackbird, and it was difficult to obtain more than four or five specimens in a day."

This was quoted by Knight (Birds of Wyoming, Wyo. Exper. Sta., Bull. 55, 1902, p. 160), who placed the species in his hypothetical list, apparently because of lack of other records to confirm it. A letter from Edward R. Warren, September 20, 1924, informs me that he had just discussed the subject with Mr. Aiken, who believes that Holden's specimens were Brewer Blackbirds. He suggested that the specimens taken were probably placed in the Chicago Academy of Science collection. A letter to the secretary of that institution, inquiring whether specimens from Holden were now there under either name, elicited a reply from Frank M. Woodruff, curator of the Academy, in which he says that the Holden collection, as well as all of the collections of the Academy, were destroyed in the great fire. He adds that he and Holden were great friends years ago, and that he has a faint recollection that the bird in question was doubtful. Not having access to the volume in which the specimen was recorded, letters were sent to Dr. G. M. Allen, secretary of the Boston Society, and to Dr. Oberholser, which brought the following information: The Rusty Blackbird is mentioned only in the Wyoming notes, which are from Holden, where it is stated to be common, breeding in low, marshy places, and that birds and eggs were both taken. The important item is that Holden failed to observe the Brewer Blackbird, which almost certainly must have occurred there during the nesting season. Therefore there is scarcely any doubt that the birds he obtained were the Brewer, rather than the Rusty. Upon inquiry I find that this is the conclusion reached by various ornithologists familiar with the region.

In 1913, Grave and Walker (Birds of Wyoming, Univ. Wyo., pp. 55, 105, 116, 124)

recorded the Rusty Blackbird in local lists by Rev. P. B. Peabody, A. E. Lockwood and C. H. Sawyer, respectively. Peabody's list for Weston and Crook counties says: "Birds seen only; hence record doubtful." Lockwood definitely reports one taken from a flock of Brewer Blackbirds near Casper in 1901. Sawyer's list for Hermosa, Albany County, says: "Rusty Blackbird. Female No. 36. Taken June 21, 1906. Parent of nest with four eggs near edge of marsh." As the Brewer and the Rusty both nest sometimes at the edge of the water and sometimes elsewhere, the site does not help us. However, the locality is within the regular breeding range of the Brewer and far from the range of the Rusty. He does not mention the Brewer, which almost certainly must have been present. This throws very grave doubt upon the record. If his specimen can be located it should be reexamined.

The Lockwood and Condit specimens appear to be the only ones free from doubt for that state. Whether the other birds in the flock from which the Condit specimen was taken were also Rusty Blackbirds cannot now be determined, as that species is reported to migrate with flocks of the Brewer, and possibly of red-wings also, along the western border of its migration route at the edge of the Great Plains.

In Colorado, the Rusty Blackbird is a little, but not much, better known. Smith (Auk, III, 1886, p. 284) recorded a pair taken near Denver, December 17, 1883. Osborn (Science, XXII, 1893, p. 212) reported one taken at Loveland in November, 1889. Cooke (Birds of Colorado, 1897, p. 95) characterized these as the only authentic records for the state, adding that "it has been several other times reported, but was evidently mistaken for Brewer's Blackbird." Perhaps that comment refers to Thorne's and Morrison's records. Thorne (Auk, IV, 1887, p. 264) reported the species to be common, in flocks with Brewer Blackbirds, at Old Fort Lyon, eastern Colorado. I have not access to Morrison's paper, in the Ornithologist and Oologist for 1889, page 148, as cited by Sclater (A History of the Birds of Colorado, 1912, pp. 315-316). Sclater considers Thorne's record doubtful, but cites Morrison's publication without data or comment, and adds two specimens taken by Aiken near Colorado Springs in 1908. Aiken and Warren afterwards (The Birds of El Paso County, Colorado, Colorado College Publication Science Series, XII, no. 13, part II, 1914, p. 545) declare that the Colorado Springs record is the only one from south of the Platte-Arkansas divide, thus also rejecting Thorne's record. Richards (CONDOR, XI, 1909, p. 101) took one female near Littleton. Lincoln (Auk, XXXVII, 1920, p. 70) took a female from a flock of Red-wings in the Clear Creek District, April 14, 1912.

Analysis of these reports indicates that the Rusty Blackbird is an uncommon winter resident in Colorado, but not a breeding bird. Perhaps the scarcity of records in both states is due to the fact that it is usually found in this region associated with flocks of Brewer and red-wings, and is hence easily overlooked, while the fact that there are more apparently authentic records for Colorado than for Wyoming may be merely because there has been more ornithological work done along the western border of the plains in Colorado than in Wyoming.

The re-identification of the Barnum example eliminates the Varied Thrush from the Wyoming list. The occurrence of the latter bird in Colorado stands upon a single observation near Boulder, December 5, 1909, by Norman deW. Betts (Auk, XXVII, 1910, p. 218; Univ. Colo. Studies, X, 1913, p. 222). Mr. Betts was an unusually careful, accurate, and conscientious observer, was fully alive to the danger of field identifications and the necessity of close, painstaking, detailed observations as a basis for such records, and was aware that there was then no record of the species for Colorado; so he was on guard against mistakes. He did not take the bird, but observed it for some time, with and without field glasses, in good light and at close range. He prepared during his observations an accurate description, which exactly coincided with that of an adult male Varied Thrush, the comparison being made in the evening of the same day. He was entirely certain of the determination and I see no reason to doubt it. Professor Cooke also accepted the description as a satisfactory determination, sufficient for a state record.

Regarding the protests occasionally voiced by ornithologists against admitting unique records based upon field identifications alone, it may be said that the value of such determinations depends upon a number of factors, such as the character of the species, the distinctness of its determinative characteristics, its maturity, sex, conditions under which it is observed, and the ability, experience, knowledge, conscientiousness and integrity of the observer. Some records based upon field identifications appear to be more dependable than others based upon the examination of skins showing

odd plumage phases of difficult species. Applying these ideas, I believe Betts' record is good. I discussed it with him at the time.—JUNIUS HENDERSON, *University of Colorado, Boulder, Colorado, November 13, 1924.*

**The California State Bird List at the End of 1924.**—In 1868 the first catalog of the birds of California was published (see Pacific Coast Avifauna no. 11, 1915, p. 5), and in it were given 353 species. In 1892, a total of 445 species and subspecies had been credited to the state. In 1902, 491 were listed; in 1912, 530; in 1915, 541. In 1919, a list of additions (see Condor, XXI, p. 41) brought the total up to 564. A similar chronicle toward the end of 1921 (see Condor, XXIII, p. 195) showed that the total known avifauna of the state then comprised 576 species and subspecies. It is the purpose of the present note to summarize the situation as it was at the end of 1924, taking into account all the proposals, published and of which I am aware, of both eliminations and additions, supplementary to the previous summaries. The following are the names and citations which appear to merit inclusion in the present connection. Of course mere changes in names have no place here; only a proposed subtraction or addition of a "concept" of a species or subspecies is entered.

#### ELIMINATIONS

1. *Anas rubripes* Brewster. Black Duck. (See Phillips, Nat. Hist. Ducks, II, 1923, p. 72.)
2. *Nettion crecca* (Linnaeus). European Teal. (See Phillips, Nat. Hist. Ducks, II, 1923, p. 217.)
3. *Carpodacus mexicanus clementis* Mearns. San Clemente House Finch. (See Dawson, Birds Calif., I, 1923, p. 213.)
4. *Melospiza melodia phaea* Fisher. Oregon Song Sparrow. (See Swarth, Condor, XXV, 1923, p. 218.)
5. *Salpinctes obsoletus pulverius* Grinnell. San Nicolas Rock Wren. (See Dawson, Birds Calif., II, 1923, p. 683.)
6. *Chamaea fasciata rufula* Ridgway. Ruddy Wren-Tit. (See Dawson, Birds Calif., II, 1923, p. 822.)

#### ADDITIONS

1. *Larus leucopterus* Faber. Iceland Gull. (See Dickey and van Rossem, Auk, XXXIX, July, 1922, p. 411.)
2. *Anas diazi novimexicana* Huber. New Mexican Duck. (See Phillips, Nat. Hist. Ducks, II, 1923, p. 58.)
3. *Guara alba* (Linnaeus). White Ibis. (See Lincoln, Condor, XXV, September, 1923, p. 181.)
4. *Rallus yumanensis* Dickey. Yuma Clapper Rail. (See Dickey, Auk, XL, January, 1923, p. 90.)
5. *Pisobia aurita* [= *Pisobia acuminata* (Horsfield)]. Sharp-tailed Sandpiper. (See Anthony, Auk, XXXIX, January, 1922, p. 106.)
6. *Tringa solitaria solitaria* Wilson. Eastern Solitary Sandpiper. (See Brooks, Condor, XXVI, 1924, p. 38.)
7. *Tryngites subruficollis* (Vieillot). Buff-breasted Sandpiper. (See Brooks, Condor, XXVI, 1924, p. 37.)
8. *Charadrius dubius curonicus* Gmelin. Little Ringed Plover. (See Oberholser, Auk, XXXVI, October, 1919, p. 559.)
9. *Arenaria interpres interpres* (Linnaeus) [in addition to *A. i. morinella*]. Common Turnstone. (See Dawson, Birds Calif., III, 1923, p. 1337.)
10. *Oreortyx picta confinis* Anthony. San Pedro Mountain Quail. (See Oberholser, Auk, XL, January, 1923, p. 84.)
11. *Dendragapus obscurus howardi* Dickey and van Rossem. Mount Pinos Grouse. (See Dickey and van Rossem, Condor, XXV, September, 1923, p. 168.)
12. *Accipiter cooperi mexicanus* Swainson [as separable from *A. c. cooperi*]. Mexican Cooper Hawk. (See Dawson, Birds Calif., IV, 1923, p. 1664.)
13. *Myiarchus magister magister* Ridgway. Arizona Crested Flycatcher. (See Dickey, Condor, XXIV, July, 1922, p. 134.)
14. *Otocoris alpestris erythromelas* Oberholser. Saskatchewan Horned Lark. (See Dickey and van Rossem, Condor, XXVI, May, 1924, p. 110.)
15. *Molothrus ater californicus* Dickey and van Rossem. California Cowbird. (See Dickey and van Rossem, Condor, XXIV, November [December 19], 1922, p. 208.)

16. *Junco hyemalis connectens* Coues. Cassiar Junco. (See Grinnell, Condor, xxv, September, 1923, p. 175.)
17. *Junco oreganus shufeldti* Coale. Shufeldt Junco. (See Ridgway, Birds N. and Mid. Amer., I, 1901, p. 286; Grinnell, Proc. Calif. Acad. Sci., ser. 4, XIII, 1923, p. 91.)
18. *Aimophila ruficeps canescens* Todd. Ashy Rufous-crowned Sparrow. (See Todd, Condor, XXIV, July, 1922, p. 126.)
19. *Aimophila obscura* Dickey and van Rossem. Santa Cruz Island Rufous-crowned Sparrow. (See Dickey and van Rossem, Condor, xxv, July, 1923, p. 128.)
20. *Melospiza georgiana* (Latham). Swamp Sparrow. (See Dickey, Condor, XXIV, July, 1922, p. 136.)
21. *Lanius ludovicianus mearnsi* Ridgway. San Clemente Island Shrike. (See Oberholser, Auk, XXXIX, January, 1922, p. 76.)
22. *Dendroica auduboni memorabilis* Oberholser. Rocky Mountain Audubon Warbler. (See Oberholser, Ohio Journ. Sci., xxi, May [June 6], 1921, p. 243.)
23. *Corthylio* [that is, *Regulus*] *calendula calendula* (Linnaeus). Eastern Ruby-crowned Kinglet. (See Dawson, Birds Calif., II, 1923, p. 801.)
24. *Planesticus migratorius caurinus* Grinnell. Northwestern Robin. (See Dawson, Birds Calif., II, 1923, p. 760.)

Figuring in the six eliminations and 24 additions listed above, on the basis of the total of 576 which was the summarized figure in 1921, we have 594 as the grand total on the California state list of birds at the end of 1924. And still we are at least 10 behind Texas! (See Oberholser, Condor, XIX, 1917, p. 68.)

I wish it understood clearly that no approval or sanction is hereby implied of all of the above, or of the previously listed, proposals. Indeed, in a number of the cases it is my private belief that the grounds of the proposal were inadequate. My personal opinion or "hunch", however, nor that of anyone else, should never be seriously offered in substantiation or refutation of any formal proposal, unless backed up by a thorough-going review of the case and a setting forth of the facts and inferences in clear, published form so that they can be reviewed and separately appraised by anyone else.

We badly need a great deal of conscientious revisionary work, both systematic and faunistic. We need numerous concise studies, based upon careful, leisurely scrutiny of adequate material, before the status of many of the birds now ascribed to California can be safely considered final. As recent good examples of the revisionary type of work now needed I would cite van Rossem's "Survey of the Song Sparrows of the Santa Barbara Islands" (Condor, XXVI, p. 217) and Swarth's "Systematic Status of some Northwestern Song Sparrows" (Condor, XXV, p. 214). The fact that these two examples relate to song sparrows has no special significance! Species and races in many other groups require similar looking into, such as the juncos, marsh sparrows, red-winged blackbirds, wren-tits, ruby-crowned kinglets, robins, poor-wills, mountain quail, pigeon hawks, and certain gulls.—J. GRINNELL, Museum of Vertebrate Zoology, Berkeley, California, January 31, 1925.

**Macgillivray Warbler in Southern California in Winter.**—On December 15, 1924, at Sycamore Grove Park, in Los Angeles, I had an individual of this species (*Oporornis tolmiei*) under observation, through 8-power glasses, for several minutes. It was flitting in and out of the shrubbery that lines a ditch and our party were on a little bridge just above. I noted the beautiful lemon yellow of the underparts contrasted sharply with the gray neck and head. The broken, white eye-ring was noted, too. Other members of our bird club report seeing one at the same place later in the day and again on January 8, 1925.—HELEN P. EVERHART, Pasadena, California, January 23, 1925.

**A Pigeon-catching Red-tail.**—Late in December last, a deputy from the Los Angeles County Game Warden's office reported that a large dark hawk had frequently been seen chasing pigeons about the Court House, in one of the busiest parts of Los Angeles; that several people had seen it actually catch pigeons in the air, and that it ate its victims while perched on the tower of the building or on the head of the Goddess of Justice, one of the ornamental statues. It had also been noted while evidently trying to catch something, probably a young pigeon or a cornered adult, that had found refuge, out of reach but not out of sight, in a recess beside the roof gutter of the building. Finally, on January 13, after considerable newspaper publicity, the hawk

was shot and brought to me for identification. It proved to be a Western Red-tail (*Buteo borealis calurus*) of last spring, sooted and smutted by city life until the white of the under parts was almost invisible. I am unable to verify statements as to the hawk catching pigeons in flight. Certainly, it fed well upon pigeon meat, however secured, and was apparently undisturbed by proximity of humans and the noise and smoke of the city.—L. E. WYMAN, *Los Angeles Museum, Los Angeles, California*, January 28, 1925.

## WITH THE BIRD BANDERS

Under the direction of J. Eugene Law, Altadena, California

**Trapping Notes from Altadena, California.**—On January 22, 1925, a female Western Bluebird was caught and banded as no. 129940 in the yard at my home in Altadena, California. On January 23, as I glanced out the window and saw that a female bluebird had been trapped, a Sparrow Hawk, which had been perching on the top of a near-by telephone pole, swooped down and lit on the trap. In an instant, a male bluebird dashed down and flew at the hawk time after time until the latter finally retired to the top of the pole. The male bluebird continued to hover near the trap until I had taken the female out and released her, whereupon the two flew off together. This female proved to be no. 129940 banded the day before. About an hour later a male bluebird was caught in the same trap and received band no. 129941.

Early in January, I set one of my Potter traps over a bird bath which has the water about four feet off the ground, hoping to get some of the many Green-backed Goldfinches and Pine Siskins that came in flocks to play in the water. In a short time, a flock drifted in and three of the goldfinches and a siskin were caught, two in each end of the trap, while the rest of the flock of more than 50 birds crowded over the trap and bath mound, chirping cheerily. As I approached the trap to remove the captives, the greater part of the flock remained at and around the far end of the trap, not two feet away, and stayed during the removal process, scolding at me and looking at the birds in the trap and trying to get at the water within. I reset the trap several times, repeatedly catching more birds before I could finish banding one just taken out. They virtually covered the trap and rock sides of the bath, flying from it to the fence near-by and back again like a swarm of bees. Suddenly they were off again, leaving the yard as quickly as they had come.

Another day, while banding a siskin just trapped at the bath, two of the goldfinches flew in and alighted on the trap which was closed, chirping vociferously at me. Judging that they wanted to get in for a bath, I reset the trap, while they retired to the fence. Then they immediately flew in, had their bath, and received their bands as a reward.—MRS. HARLAN H. EDWARDS, *Altadena, California*, January 29, 1925.

**The Western Bird Banding Association.**—The processes of evolution continue to operate. New necessities demand new adjustments. And the organization of the Western Bird Banding Association, unthought-of a year ago, is the natural result of today's necessity.

Primarily this necessity pertains to finances. The splendid work of a corps of energetic banders must not be wasted. There must be a depository in the West where all the occurrence data that is being collected in banding work will be assembled and maintained in a manner that will make it available to students who want to dig out its problems. The deeper aspects of these problems can best be analyzed by workers who have had direct contact with western topography and its faunas. If the West is to maintain its place, therefore, in the development of banding work, it must provide the best equipment for its workers.

Moreover, banding work, more than any other ornithological activity, demands coöperative organization. It is work in which each will contribute his bit to round out the whole. Individual observations and experimentations will continue to yield

valuable contributions, but we must not lose sight of other phases only possible through the coöperation of many. Only by such means can the seasonal transfer of populations be traced.

Proper development of the banding work, then, demands an exchequer which can provide secretarial service to care for an extensive correspondence, and which can pay for printing and distribution of circulars, report forms, summaries, etc. Other banding functions are demanding financial support.

The plan of organization contemplates the closest coöperation with the Cooper Ornithological Club and with the Biological Survey, without interference in any way with the functions of either. The set of records will, in a way, duplicate those sent to Washington, but in more condensed form, thus avoiding an excessive added burden on the operators who furnish to the Association a record of their work. As far as possible the Association will coöperate with the several Game Commissions in careful banding studies of the game problems.

It was to perfect such a program that the Western Bird Banding Association was organized at Los Angeles on January 11, 1925, and temporary officers were elected, as follows:

Secretary, Mrs. Harlan H. Edwards  
Business Manager, Harold Michener  
Vice-President, Wright M. Pierce  
President, J. Eugene Law

Permanent organization was deferred until spring, when a meeting of all western banders will be called. The Association will devote its activities to the Western Province, that is, the states west of the 100th meridian, with the region south, and the provinces of Canada west of the 110th meridian, with the region north.

The membership roll is now open and all those interested in banding are invited to join. \$3.50 covers active membership in both the Cooper Ornithological Club and the Western Bird Banding Association, and \$1.00 covers associate membership in the latter only. Active members receive *THE CONDOR*, as do sustaining members who pay \$10.00. Life memberships are \$50.00.

**New Banding Publications.**—In October, 1924, Bulletin no. 1 of the Eastern Bird Banding Association was published, with John Treadwell Nichols as editor. While it is brief, three pages of banding notes, and two pages of roster, it started a new departure. It is the first serial to appear in America devoted primarily to banding activities. The number of well-known ornithologists in its list of 102 members indicates the place that banding work is taking in the East. A splendid feature, which may well be perpetuated, lies in the brief suggestive and supplementary notes which the editor has appended to two of the items.

Under the editorship of Charles L. Whittle, the first number of the Bulletin of the Northeastern Bird Banding Association appeared in January, 1925. It is to be issued quarterly. We like its neatness and its careful editing. This number contains three particularly "meaty" contributions to bird life-histories, all the result of careful observations in connection with banding operations. There is, also, a roster which lists 352 members, of whom 128 maintain banding stations.

The front cover of the Bulletin pictures a Chickadee in the act of weighing itself on a specially constructed scale. We will be interested in a description of this.

**Among the Banding Stations.**—Perhaps the most outstanding development in trapping technique for 1924 was the general adoption of some form of water trap. Almost any type of trap catches birds when it covers a dish or pool of water where birds habitually come to drink and bathe.

In this way Mr. and Mrs. Harlan H. Edwards, of Altadena, California, have "brought to band" with Potter traps 54 Audubon Warblers, 13 Siskins and 26 Green-backed Goldfinches during December and January. Of their 8 Western Bluebirds, some, at least, came for water, though a suet-baited trap caught the first ones. All of these birds have rather consistently ignored food-baited traps in the West.

In the heart of Pasadena, California, a Clover-leaf Trap baited with a mixture of "bird seed", sunflower seed, walnuts and mush, with a dish of water outside, has yielded Mr. and Mrs. Harold Michener 145 California Purple Finches since January 1. As 565 of the finches have been taken out of the trap, there is an average of nearly four times for each bird. This trap is on the ground under deciduous trees.

Mr. and Mrs. A. G. Barr, of South Pasadena, California, report 38 Cedar Waxwings banded, all caught with a drop trap over water.

At Wright M. Pierce's station in Claremont, California, we suspect that water has been responsible for a good list of California Purple Finches and Cedar Waxwings, although he also keeps in a corner of each trap all sorts of things from the kitchen, such as fruits, tomato, lettuce, meat, and bread, as well as seeds and raisins. Quite likely the immediate presence of deciduous trees is a factor influencing the presence of the Purple Finches and Waxwings.

So far as I know the first water trap in the West was used at the station of Mrs. G. Maurice Crow, at Glendora, California, where a trap set over a watering trough immediately proved irresistible to Audubon Warblers and Hermit Thrushes.

Mr. Johnson A. Neff, at Corvallis, Oregon, banded 148 juncos in the last three months of 1924. He reports the Shufeldt Junco outnumbering the Oregon Junco about 25 to 1, using specimens identified by Dr. H. C. Oberholser for comparison. Next in importance were 33 Song Sparrows (not differentiated from the Rusty, if different) and 17 California Purple Finches.

**Emergency Supply of Bands.**—Owing to the time required for a return communication from Washington, an emergency supply of bands has been deposited in the West. Banders should continue to order their supplies of bands from Washington in advance of their needs; but when, as may well happen, a wave of birds suddenly exhausts the bands on hand, enough will be sent from the emergency supply to carry over until those ordered from the east can arrive. Address such emergency requests to J. Eugene Law, Altadena, California, stating probable needs till new supply comes.

**Symposiums.**—Responses with data asked for under "Symposiums" (CONDOR, vol. 26, 1924, p. 232) were disappointingly few. Some particularly good data, however, were received and all of it is being carefully tabulated and preserved and will be published when the quantity warrants. Obviously, to trace great annual waves, such as occur in the migration of the Golden-crowned and Gambel and Nuttall sparrows, a quantity of confirmatory data is necessary. In this, every one can help, whether a bander or not; but of course without the bands only the pace of the van and rear guards can be traced, with no certainty that these are not "leap-frogging". Advice of any *definite* impressions giving the date when these forms are last seen this spring will be appreciated.

**Analyses of Banding Records.**—As banding work progresses, special interest attaches to simple displays which will give the operator a comprehensive idea of what is going on at his own station. The mere list of birds banded and of repeats taken assumes intensive value when arranged in tabulations which reveal seasonal changes in local population. Each style of tabulation or graph seems to present some different aspect for consideration, not brought out in the others. Obviously, every bird banded and every repeat recorded adds to the value of such analyses.

Methods for analyzing banding data are developing rapidly. This column will welcome brief descriptions of any new ideas that are developed. Some already in use in the Southwest are here presented.

1. **Calendared graphs.** Many are using a "quadrille" ruled sheet, large enough to provide a vertical column of squares for each day of the period under study. Mr. Harold Michener brought to notice such sheets, 11 x 16½ inches, used in business analyses, which provide a column for each day in the year with the dates printed across the top, and which have the horizontal ruling in 5- and 10-line groups. These sheets are sold under the Codex trade name "One year by days."

Allowing 5 lines to a bird (= band no.), 5 years are provided for. In the proper squares the dates of appearance of the banded bird are recorded by half circles or half squares for nestlings, hollow circles or squares for immatures, and solid circles or squares for adults. A tiny point at the upper right corner for ♂ and at the lower left for ♀ amplifies the record. Only individuals of one species are entered on a sheet.

Mr. and Mrs. Harlan H. Edwards use a similar form slightly more condensed, known to the trade as "Lefax no. 108." Mr. Edwards suggests that a second 5-year period can be superimposed on the first by the use of a different colored ink, when a bird persists that long.

By such method, one gets a graphic visualization of his work with any species. In my own case, I find the graph improved by connecting with a ruled line the symbols representing in horizontal series the repeated appearance of the individual.

2. Trap days. The above record demands a companion record which gives the days when the traps were in operation. Blank bird days are misleading unless neutralized by blank trap days. The same calendared graph is being used for this purpose, 10 horizontal lines for a year. Thus, in the vertical column of 10 squares which represent a day, one can darken a portion to correspond with the portion of the day when the traps were working. This record looks somewhat like the conventional rain-fall chart.

3. Tabulation by seasons. Using a page for a species, one may tabulate his birds banded in a season down the middle of a wide vertical column, entering to the left of the band number the date the bird first appeared and to the right the date it last appeared. In successive columns to the right of this first column the same thing may be done for subsequent seasons, keeping all the records for any one individual on a single line. Thus each band number appears only once in a season. The record can be continued endlessly from page to page, since the left or first column automatically discontinues itself at the end of the season, allowing the next column to be shifted to first place on the next page. See table 3.

*Zonotrichia coronata*  
*st*

Winter	1921-1922	Winter	1922-1923	Winter
Feb 2	6645	Mar 11	Dec 5	6645
Mar 10	24801	Apr 4	Dec 4	24801.
Apr 23	24828	Apr 23	Dec 4	24828
Apr 29	24829	Apr 29		
			Oct 20	12382
			Nov 19	12383
			Nov 20	12384
				Oct 27
				Oct 28
				123
				Oct 25
				123
				Nov 4
				Nov 1
				4114

Table 3. UPPER LEFT CORNER OF A FORM FOR A TABLE OF THE INDIVIDUALS OF A SPECIES WHICH RETURN YEAR AFTER YEAR, WITH THE DATE OF ARRIVAL AND DEPARTURE EACH YEAR.

4. Tabulation by weeks. The ideal tabulation would be a daily record of the kind here to be described. One who can devote much of his time to this work should keep such a one. But a weekly summary yields definite impressions of bird movements and population. Always, a species to a sheet. Vertical columns represent 7-day periods throughout the season. Band numbers, best arranged serially for their first entry, are entered once in each column when the bird appeared during the week which that column represents. All the entries for the same bird are made on the same horizontal line. Thus one may discover that his entire population of an earlier period is replaced by a later population of the same species. But this record is one-sided without a record of the dates in each week on which the traps were open for business. A line immediately under the week heading is used for this purpose. See table 4.

5. Year's summary by months. Use a quadrille ruling with  $\frac{1}{4}$ - or  $\frac{3}{4}$ -inch squares. Enter along the left margin a list of the species banded, allowing 3 lines to a species. Use 3 columns for a month, one for birds banded, one for repeats and one for returns. A return becomes a repeat after its first month, of course, and a repeat is not included as such until the month following its first capture. Reserve 3 columns along the right margin, and one line at the bottom for totals. The total number of birds of a species banded during the month is entered in the upper left square reserved for that species, the number of individuals which repeated (not the total number of repeats) is entered

1923		<i>Zonotrichia coronata</i>									
October		W3				November				December	
		21-27	28-3	4-10	11-17	18-24	25-1	2-8	9-15	16-22	
Trap days		21,22,23 24,25,26,27	28,29,30 31,1,2		4		18			12	
im.		4/140	4/140	4/140					4/140		
im.			4/142								
ad. ♀			4/143								
ad. ♂			4/144								
ad. ♂			4/145	4/145							
ad. ♂				4/146							
im.					4/147						
im.								4/148			
ad. ♂											

Table 4. UPPER LEFT CORNER OF A FORM FOR A TABLE OF THE INDIVIDUALS WHICH COMprise THE LOCAL POPULATION FROM WEEK TO WEEK.

in the middle square on the second line, and the number of individuals which returned to the station during the month are entered in the lower right square. Thus, one's footings horizontally give the totals for each species, while the footings vertically are the total individuals of all species. Obviously, the horizontal total of repeats is meaningless and should be ignored, but all the other totals both ways have direct significance with regard to the local population. See table 5.

1924 Las Leyes Station Altadena Calif.	January			February			ber	Totals		
	Banded	Repeats	Returns	Banded	Repeats	Returns		Returns	Banded	Repeats
<i>Zonotrichia</i> <i>coronata</i>	1			3				212		
		7							—	
			0							20
<i>Zonotrichia</i> <i>leucophrys</i> <i>gambeli</i>	3			1						
<b>Totals</b>	6	11	0	6	16			745	40	

Table 5. FRAGMENTS FROM THE 1924 SUMMARY FOR ONE CALIFORNIA STATION, TO SHOW METHOD OF TABULATION.

One should bear in mind that in all such tabulations by periods an individual must only be counted once for each period unit, regardless of the number of times it may have appeared during such period unit. To illustrate: If 15 were entered in the repeat column for January because band no. 1234 had repeated 6 times and band no. 1236 9 times, when no others had repeated, the record would be useless. If, on the other hand, one's entry of repeats for January in this case were 2, his record would be truly a census tally for the month.—J. EUGENE LAW, Altadena, California, January 29, 1925.

## EDITORIAL NOTES AND NEWS

During the coming summer there is to be inaugurated a school of "Field Natural History" in Yosemite National Park. Instruction is planned primarily for the training of nature study teachers, those who are called upon to act as leaders of Boy Scouts or Campfire Girls, or as nature guides at summer camps. Emphasis will thus be placed upon out-of-door knowledge of living things. The new Yosemite Museum, affording exceptional facilities for the work, will serve as headquarters. Dr. Harold C. Bryant will be in charge, and the seven or eight individuals serving as nature guides in Yosemite will act as instructors. During this first year the number of those who can be received in the school will necessarily be limited. Anyone interested in obtaining detailed information may apply to the Park Naturalist, Yosemite National Park.

In the death of John Van Denburgh, on October 23, 1924, the general field of science lost a worthy exponent and the Cooper Ornithological Club lost a member of long standing and loyal influence. In 1898 and 1899, Van Denburgh published articles on birds of various parts of California, which remain to this day models of accuracy and sources of important distributional and biographical data. His attention for many years subsequently was absorbed in the study of herpetology, in which subject he contributed with great authority. Of late years his interest in birds had returned, as witness several articles in recent volumes of *THE CONDOR*, the last of which appeared in the March issue of last year.

We learn through Professor Junius Henderson, Curator of the Museum of the University of Colorado, that two important collections of bird skins have been received by that institution during the past year. Dr. Leonard R. Freeman, of Denver, presented his entire collection, consisting of 645 skins taken by him in the Ohio Valley from 1875 to 1880. This accession proved to be in excellent condition and to be especially rich in plumage phases of the warblers. Dr. W. H. Bergtold donated his collection of 576 skins and many sets of eggs, taken chiefly in the Rocky Mountain region and New York. These two accessions add many species new to the University of Colorado collec-

tions, and there are also some record specimens of importance.

### COMMUNICATION

#### ANENT THE CROW

##### Editor *THE CONDOR*:

While deplored the introduction of controversial matter into the pages of our ornithological magazines, I would like to take some exception to the address of Dr. Witmer Stone which you extoll on page 44 of the January *CONDOR*. The sentiments you quote are sentiments only, and especially in regard to "the much maligned Crow" are obviously biased by the author's regard for that bird. No notice is taken of any recent publications dealing with the increasing menace of the Crow; on the contrary, the definite statement is made that "he is doing no more harm today than he did fifty years ago, if as much."

It is exactly on account of the prodigious increase of the Crow, particularly in the West, an increase that threatens the existence not only of our game-birds and waterfowl but also of the entire bird population of regions affected by agriculture, that true conservationists who have really studied the question are advocating the absolute outlawing of the black villain. Besides the evidence of my own observations extending over a large portion of the West and covering a period of thirty-eight years, all observers whom I meet and others who voluntarily write to me are unanimous as to this increase which probably amounts to thirty-fold in the last twenty years. A sample letter dated September 24, 1924, from a veteran naturalist, Mr. Wm. B. Mershon, whose last book you review on the page preceding your review of Dr. Stone's brochure, is as follows:

"I have just read what you have to say about crows in the *CONDOR* in the September-October issue just at hand, and this is simply to let you know that I agree with everything you say.

"I have a ranch up in Saskatchewan, about twenty-five miles northeast of Moose Jaw. I began going into that country in 1903. The crows were few then. I rarely noticed them. Of late they have been there in droves, and there is no question but that they destroy the eggs of the ducks. Grouse have become very scarce

and for two years now our local duck crop has been very much lessened. How much the crows have had to do with it, I don't know, but the crow is a pest and he ought to be kept down, and the only way to do it is to make him an outlaw."

It is to be regretted that the editors of our two foremost magazines of technical ornithology, to whom the public should confidently look for guidance, should be so swayed by misdirected sentiment as to deprecate the splendid work being done under the Economic Investigations Department of the Bureau of Biological Survey. The reading of the 1924 Report of the Chief of this Bureau affords a fine stimulus after the depression induced by the perusal of the Little Bedtime Stories of some of our ornithological leaders, dealing for the most part with that figmental phantasy, the "Balance of Nature". What this "balance" really amounts to can only be learned by a sojourn in an absolute wilderness unaffected by the influence of man; then one realizes what a scarcity of bird-life really is.

It is difficult to write with moderation of the activities of the lovers of predatory animals when one of one's closest friends faces absolute ruin, together with other sheep-ranchers, after years of effort, all on account of the estimable coyote; or when some of our most interesting birds such as the Sandhill Crane and Long-billed Curlew (which are never molested by man here) are on the very verge of extermination throughout the region, altogether due to coyotes and crows.

What you should do, my dear Grinnell, is to change your rapid peering habit of a Gnatcatcher to the careful intensive glare of a Canyon Wren into dark places,—and get a white patch on your throat to help you!—ALLAN BROOKS, *Okanagan Landing, British Columbia, January 26, 1925.*

#### PUBLICATIONS REVIEWED

**BRITISH WADERS.** Illustrated in Water-Colour with Descriptive Notes. By E. C. ARNOLD. Demy 4to, pp. viii + 102, 51 colored plates; Cambridge University Press. Price £3-10s. net. (Limited edition of 50 signed and numbered copies on hand-made paper, of which 45 copies are for sale, £7-7s. net.)

The present volume is not a treatise on British Waders. It is primarily a collection of personal observations and is a record of remarkable achievement. Our author has remarks to make on 53 species of Limicola, of which he has actually

collected no less than 29 and has narrowly missed securing a good many more. Many of his waders are great rarities on the British list and include the Buff-breasted Sandpiper (*Tryngites subruficollis*) and the American Pectoral Sandpiper (*Pisobia maculata*).

The usual detailed plumage descriptions are omitted, as the author considers them superfluous in a book of this kind, with so many excellent scientific manuals already available. The total length of each bird is given in the text. It seems a pity, however, that there is no index.

"Arnold's luck" is a phrase that I have several times heard in English bird circles, as though he were the most fortunate collector in the country. This has always struck me as being something of an injustice; for one only has to take a ramble with the author to realize that he deserves everything he gets. He knows his birds intimately; he is remarkably observant, highly appreciative of minute color differences, and forever on the watch for a strange movement, flight or note, and tireless in the pursuit of the unusual when he has found it. It is these things that make the successful collector, and not the luck that is so easily ascribed to him. A perusal of the pages is an incentive to improve one's own methods.

The greatest value in these notes lies in the emphasis laid on the salient features to be noticed in the field. Many of the species dealt with are practically cosmopolitan and turn up on both sides of the Atlantic from time to time. The notes, written as they are by an exceptionally able observer, therefore have considerable interest for those of us on this side who are also wader enthusiasts. There must be a good number of collectors even on this home continent of the Buff-breast who are still awaiting the first chance of a capture.

Many questions of interest to field workers are discussed. Among them may be mentioned the one most repeatedly referred to, When should a sight record be accepted and when should it not? As our author all too truly remarks, sight records are received with as much skepticism by the most ardent protectionists as by the most rabid collectors. The query would appear to be at least partially answered by such episodes as the author's first capture of a "Killdeer". He relates the incident in the following words. "A bird, obviously a Plover of sorts, rose suddenly from the grass with a slow flight that was new to me. It had a bright chestnut rump

and, had I missed it, I should have maintained all my life that I had missed a Killdeer. However, I hit, and, rushing up, found that I had slain an immature Grey Plover, whose white rump had been stained by the blood from a previous wound, which had apparently also affected its flight; it was the sort of occurrence which tends to make one lose faith in records of rare birds 'seen'."

To make adequate comment on the 51 color plates is a difficult task, for they are original in their interpretation and execution. One would certainly not mistake Arnold's work for that of any other artist. A few are open to honest criticism—inaccuracies of color and unconvincing attitudes. On the other hand, many of them are very exceptionally pleasing. It is refreshing to have a series of paintings of such a favorite group of birds from an original viewpoint, and so far removed from the usual stereotyped pattern. The author, who is not a professional artist, certainly deserves congratulations on the successful completion of a very big undertaking.

The book is most tastefully designed and flawless in its production.—WILLIAM ROWAN, *University of Alberta, Edmonton.*

SWANN'S "MONOGRAPH OF THE BIRDS OF PREY."\*—There is a great attraction in sumptuous books, in publications combining large size, broad page margins, beautiful illustrations and generally elaborate treatment. When the subject matter, too, is unusual in its appeal, and is technically well handled, such a work cannot fail of a cordial reception. Swann's "Monograph of the Birds of Prey" presents just this combination of pleasing appearance with authoritative systematic treatment. An added interest lies in the fact that this work deals with a group of birds that (save for the same author's "Synopsis of the Accipitres" of a few years ago) has not been accorded comprehensive treatment of any sort for many years, not since the publication in 1874 of volume I of the Catalogue of Birds of the British Museum.

The present monograph, judging from part one, leaves little to be desired so far as book-making is concerned. The finished

publication will assuredly form a beautiful set of books. The treatment, too, is for the most part satisfactory. The Introduction is in large part concerned with the characters and classification of the Accipitres, including a tabular arrangement of genera showing the distribution of species throughout the world. We also find therein a statement of the author's attitude toward the concepts of species and subspecies. He objects to the latter term, but merely as a term, preferring the word "form" instead. A critical mind might find some inconsistency between the author's expressed opinion "that each species is only a group of forms, neither one of which is a variety of the other", and, in the systematic accounts, the different typography he uses for the first "form" listed of each species, as compared with the others.

Nearly one-half of the Introduction is devoted to a dissertation upon falconry. Following the Introduction, the remainder of part one contains systematic accounts of the New World vultures and of about one-half of those of the Old World. There are five plates in this "part", all illustrations of exceptionally high grade; three of these illustrate in color five different species, one (also in color) figures the eggs of twelve different species, and one (photogravure) shows the nest of the Griffon Vulture.

The account of each species is prefixed by small-type paragraphs, including a synonymy with a fairly extensive list of references, statements of "distribution" and "characters", and descriptions of male, female and young, all concise and, for the most part, excellent. Following are one or two pages of general accounts, and it is here, I feel, that there are features that are open to criticism.

These paragraphs consist largely of quoted matter. This is inevitable, since no one man could be expected to have personal knowledge of all the species concerned; but the selections are not always carefully chosen. At any rate, this is the case in the one or two species with which I happen to be familiar. In the account of the California Condor the quotations are all from early writers, recording some inconsequential facts and some statements that have never been substantiated, while the careful work of later observers is all ignored. The statement that the Condor formerly nested in hollow trees is here twice repeated, unquestioningly, but it is doubtful if there is any sufficient ground for the belief.

\* A Monograph of the Birds of Prey (Order Accipitres) | by H. Kirke Swann, F. Z. S., M. B. O. U. | Corresponding Fellow of the Amer. Orn. Union | Illustrated by Plates reproduced in colour from drawings made expressly for this | work by H. Gronvold, also Coloured Plates of Eggs, and Photogravure Plates | London | Wheldon & Wesley, Ltd. | 2, 3, & 4 Arthur Street, New Oxford Street, W. C. 2. Part 1. November 15, 1924. Fp. i-xi + 1-52, five plates (unnumbered). Price 26s. net.

In the "distribution" of the California Condor, that species is said to occur casually east to Arizona. This, too, is a statement that appears in many other books, handed down from early writers and with no basis of fact. On the other hand, *Coragyps urubu urubu* is not stated to extend westward, casually, to Arizona, although there is a well-attested published record of such occurrence in recent years. Curious, in how many different forms of study there reappears this (often unconscious) reverence for accepted beliefs of bygone times, together with a contempt for recent discoveries! Then, one would like to know what authority there is for the statement that the North American Turkey Vulture "attacks newly born lambs, pigs, and sick or wounded animals". It is disappointing to find the author thus uncritical in his acceptance of legendary beliefs. It is in a book of this sort that we would hope to see old errors quashed, not perpetuated.

The "Monograph of the Birds of Prey" will, of course, take its place as the authoritative systematic treatment of this group of birds, and it will probably remain so for years to come.—HARRY S. SWARTH, *Museum of Vertebrate Zoology, University of California, Berkeley.*

#### MINUTES OF COOPER CLUB MEETINGS

##### NORTHERN DIVISION

DECEMBER.—The December meeting of the Northern Division of the Cooper Ornithological Club was held at the Museum of Vertebrate Zoology, Berkeley, at 8 o'clock, December 18, 1924. President Dixon called the meeting to order with the following members present: Misses Atsatt and Pringle; Mesdames Grinnell, Mexia and Mikesell; Messrs. Borell, Bryant, Clabaugh, Cooper, Evermann, Grinnell, W. Grinnell, Hall, Hudson, Hunt, Labarthe, Mailliard, Simpson, Storer and Swarth. Visitors were Misses Furlong and Zeile; Mesdames Furlong, Hudson, Hunt, Labarthe, Perine and Swarth; Messrs. Foster, Hall, McGowan and Perine.

Minutes of the Northern Division for November were read and approved. Minutes of the Southern Division for November were read. Resignations were read and accepted from Mrs. Anna J. Kaseberg and Mrs. W. H. Smyth. Officers of the Northern Division for 1925 were nominated as follows: for president, Mr. C. B.

Lastreto; for vice-president, Mrs. Amelia S. Allen; for secretary, Mrs. Hilda W. Grinnell. A note was read from Mr. W. L. Finley stating that in all probability the waters will be turned again into Lower Klamath Lake. All members listened with pleasure to the reading of a Christmas greeting from Mrs. Amelia S. Allen, who is now "Fording" in Greece and studying the birds there.

The December meeting proved to be a surprise party for Mr. Joseph Mailliard, as the Northern Division of the Cooper Club, acting concurrently with the Southern Division, waived the regular rule and at the first reading of the motion unanimously elected Mr. Mailliard to Honorary Membership in the Cooper Ornithological Club. This action was taken by the Club in recognition of Mr. Mailliard's life-long work with California birds and of his general interest in the welfare of the Club.

The contribution of the evening, entitled "The Pittsburgh Meeting of the A. O. U.", was presented by Mr. Joseph Grinnell; but since the gist of it has appeared in THE CONDOR (p. 44), the Secretary will not give further report of the evening's talk. However, since, following a precedent of long standing, no poetry finds sanction in the pages of our magazine, let us attempt to save for posterity, in these Minutes, Mrs. Charles B. Graves' clever lines to the Dipper, as taken down and reported by Mr. Grinnell:

Did you ever see an ouzel wink?  
It's more of a trick than you would think!  
He bobs his tail and bats his eye,  
And lets his nictitating membrane fly!

Adjourned.—HILDA W. GRINNELL, Secretary.

JANUARY.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held at the Museum of Vertebrate Zoology, Berkeley, on January 22, 1925, at 8 P. M. President Dixon was in the chair, with the following members present: Misses Atsatt, Flynn, Head, Pringle, Wythe, Van Gaasbeek; Mesdames Delpont, Grinnell, Kibbe, Mikesell, Mead, Mexia, Perry, Schenck, and Stock; Messrs. Bryant, Clabaugh, Cooper, Dixon, Elmore, Evermann, Gignoux, Grinnell, W. Grinnell, Hall, Kibbe, Labarthe, Mailliard, Ray, Schenck, Simpson, Swarth, and Trost. Visitors were: Misses Smoot and Zeile; Mesdames Clabaugh, Gignoux, Evermann, Hall, Ray, and Swarth; Messrs. Dietz, Foster, Perry, and Walford.

Minutes of the Northern Division for December were read and approved. Min-

utes of the Southern Division for December were read. The secretary presented for membership the name of Harold W. Clark, La Jota, Napa County. The resignation of Miss Florence M. Van Gaasbeek was accepted.

A communication was read from the chairman of the Scientific Research Section of the Commonwealth Club of San Francisco, requesting the coöperation of the Cooper Club in the assembling and recording of all available data pertaining to the California drouth of 1924. President Dixon suggested that all members having data to contribute communicate directly with Dr. E. P. Meinecke, chairman of the sub-committee in charge of the study.

A request was read from Dr. Barton W. Evermann, acting secretary of the Pacific Division of the American Association for the Advancement of Science, asking the Northern Division of the Cooper Club to appoint two delegates to meet with the committee of affiliated societies to plan for the meetings to be held June 17 to 20 next, at Reed College, Portland, Oregon. Authorized by a motion from the Club, the Chair appointed Mr. Joseph Mailliard and Mr. Harry S. Swarth as delegates. Dr. Evermann called the attention of those present to the literature now being circulated by the Anti-Vivisection League of California and asked for the active coöperation of all those interested, in defeating the objects of this league.

Mr. Swarth briefly outlined the scope of Swann's Monograph of the Birds of Prey and exhibited the newly-issued Part I, which covers certain vultures, including the California Condor. Through the generosity of a certain Cooper Club member this work has been subscribed for by the University of California library.

Before proceeding to the program of the evening the chairman called for the election of officers. Those nominated at the December meeting of the Northern Division were then duly elected, to serve during 1925, as follows: President, Mr. C. B. Lastreto; Vice-president, Mrs. Amelia S. Allen; Secretary, Mrs. Hilda W. Grinnell. Mr. Dixon then called upon Mr. Lastreto to take the chair.

At the chairman's request, Mr. A. S. Kibbe reported upon the eleventh national conference of the American Game Protective Association, held recently in New York City. Mr. Kibbe spoke with enthusiasm, and enumerated many interesting features of the convention, referring

optimistically to the probable passage of the Anthony bill, at the same time, however, urging that each Cooper Club member write to his Senator and Representatives expressing approval of the measure. At the invitation of Mr. Lastreto, Mr. Kibbe agreed to present at the next meeting of the Northern Division a resolution embodying the Club's approval of the measure and concern for the passage of it.

Club members listened with close attention to the reading by Mrs. Rose Carolyn Ray of an account of her discovery of a nesting Blue-throated Hummingbird in the Huachuca Mountains of Arizona on May 27, 1924. As this is but the fourth recorded nesting of this beautiful exotic species within the borders of the United States, Mrs. Ray was roundly congratulated upon her good fortune. A vivid account by Mr. Joseph Grinnell of the effect of a ten-inch snow-fall upon the midwinter bird-life of the Paine Creek district near Mount Lassen closed the evening's program. Adjourned.—HILDA W. GRINNELL, *Secretary*.

#### SOUTHERN DIVISION

NOVEMBER.—The Southern Division of the Cooper Ornithological Club held its regular monthly meeting Tuesday, November 25, 1924, at 8 P. M., at the Los Angeles Museum, Exposition Park. In the absence of the president and vice-president, Mr. Appleton was elected chairman. Members present were Misses Potter and Pratt; Mesdames Edwards, Ellis, and Law; Messrs. Allen, Appleton, Calder, Chambers, Colburn, Law, Michener, Nokes, Pierce, Rich, Howard Robertson, J. McB. Robertson, Ross, and Reis. Visitors were Misses Endicott and Elson, Mrs. Reis and Carl Chambers. Minutes of the October meeting were read and approved, followed by reading of the October minutes of the Northern Division.

The following applications for membership were read. Mrs. Martin Abernethy, Box 282, Claremont, by Wright M. Pierce; Elverton C. Berry, Box 234, Conway, N. H., by W. Lee Chambers; Martha Jean Blackwelder, Box NN, Stanford University, by J. Eugene Law; Courtenay Brandreth, Ossining, N. Y., by Major Allan Brooks; Brighton C. Cain, 221 Thayer Building, Oakland, by H. C. Bryant; Winifred McGugin, 2525 Hearst Avenue, Berkeley, by Edw. P. Rankin; Arthur Newton Pack, 11 Morven Street, Princeton, N. J., by W. L. Finley; Daniel Van

Dellen, 48 Maple Street, Salinas, by O. P. Silliman; Miss Selma Werner, 2085 Sacramento Street, San Francisco, by H. C. Bryant.

Mr. Law called attention to the report on returns of banded birds recently published by the Biological Survey and reviewed the contents briefly. Dr. Nokes gave a short account of his visit this summer with Mr. E. J. Brown in Florida.

Mr. Law reported that the American Ornithologists' Union had rejected the invitation of the Cooper Club to hold its 1925 meeting in Los Angeles. Of the 147 fellows and members to whom inquiries were addressed, 118 responded and chances seemed good that 24 fellows and 28 members would be present if the meeting were held in California. At the 1923 meeting of the A. O. U. in the east, there were 25 fellows and 25 members, and at the 1922 meeting, 24 and 17, respectively. Since, however, only about one-fifth of the A. O. U. membership are members of the Cooper Club and only about one-tenth live west of the 100th meridian, the A. O. U. meetings in the west will probably continue to be a rare occurrence. The figures on hasty count are:

	A. O. U.	Both Cooper Club
1924 Roster	1845	314
West of 100th Mer.	167	126

Mr. Allen remarked on the numbers of jays and magpies seen by him on a recent visit to England, where in former years they had been very scarce. Several small booklets, descriptive of western birds, and illustrated in color, were passed around. Mr. Chambers had just received these from the publishers, Mr. and Mrs. R. Bruce Horsfall of Portland, Oregon.

Some of the banders present gave interesting experiences with birds banded and returns taken. Mr. Ross brought up the question of the flight of the White Pelican along the mountains. Several members contributed their observations on this subject. Adjourned.—ELLA H. ELLIS, *Secretary*.

DECEMBER.—The Southern Division of the Cooper Ornithological Club held its regular monthly meeting at the Los Angeles Museum, Exposition Park, Tuesday evening, December 30, 1924, with President Wyman in the chair and an attendance as follows: Misses Burnell, Potter, and Sykes; Mesdames Calder, Ellis, Law, Robertson, and Spinney; Messrs. Appleton, Bryan, Calder, Chambers, Colburn, Hanaford, Henderson, Law, Michener, Nokes, Pemberton, Reis, Rich, Robertson,

Runner, and Wyman. Visitors included Mesdames Bryan, Reis, and Wyman; Messrs. Carl Chambers, Robb, Spaulding, and Webster.

Minutes of the November meeting were read and approved, followed by the reading of the Northern Division minutes for November. The following applications were presented. Rell G. Haskett (Mrs. Bert), Box 95 A, Route 2, Phoenix, Arizona, by J. Eugene Law; Dr. G. A. Howatt, Room 405 Humboldt National Bank Bldg., Eureka, by Haven Howatt; John Edward Harry Kelso, M. D., Edgewood, Arrow Lakes, B. C., Canada, by W. Lee Chambers; James S. Lord, St. Stephen, N. B., Canada, by W. Lee Chambers; Paul E. Page, 401 North Yakima Ave., Tacoma, Wash., by J. Eugene Law; George Miksch Sutton, State Game Commission, Harrisburg, Pa., by W. Lee Chambers; Frederick Thompson, Mill Valley, by W. Lee Chambers.

A nomination, under date of November 20, signed by Messrs. Law, Chambers, Pierce and Rich, was read, proposing the name of Mr. Joseph Mailliard for honorary membership in the Cooper Club. Mr. Law spoke of Mr. Mailliard's many years of activity in western ornithology, and proposed that the usual thirty days delay be waived in this case and that he be elected to membership at once. This motion was seconded by Dr. Rich, and being put to vote, was unanimously carried.

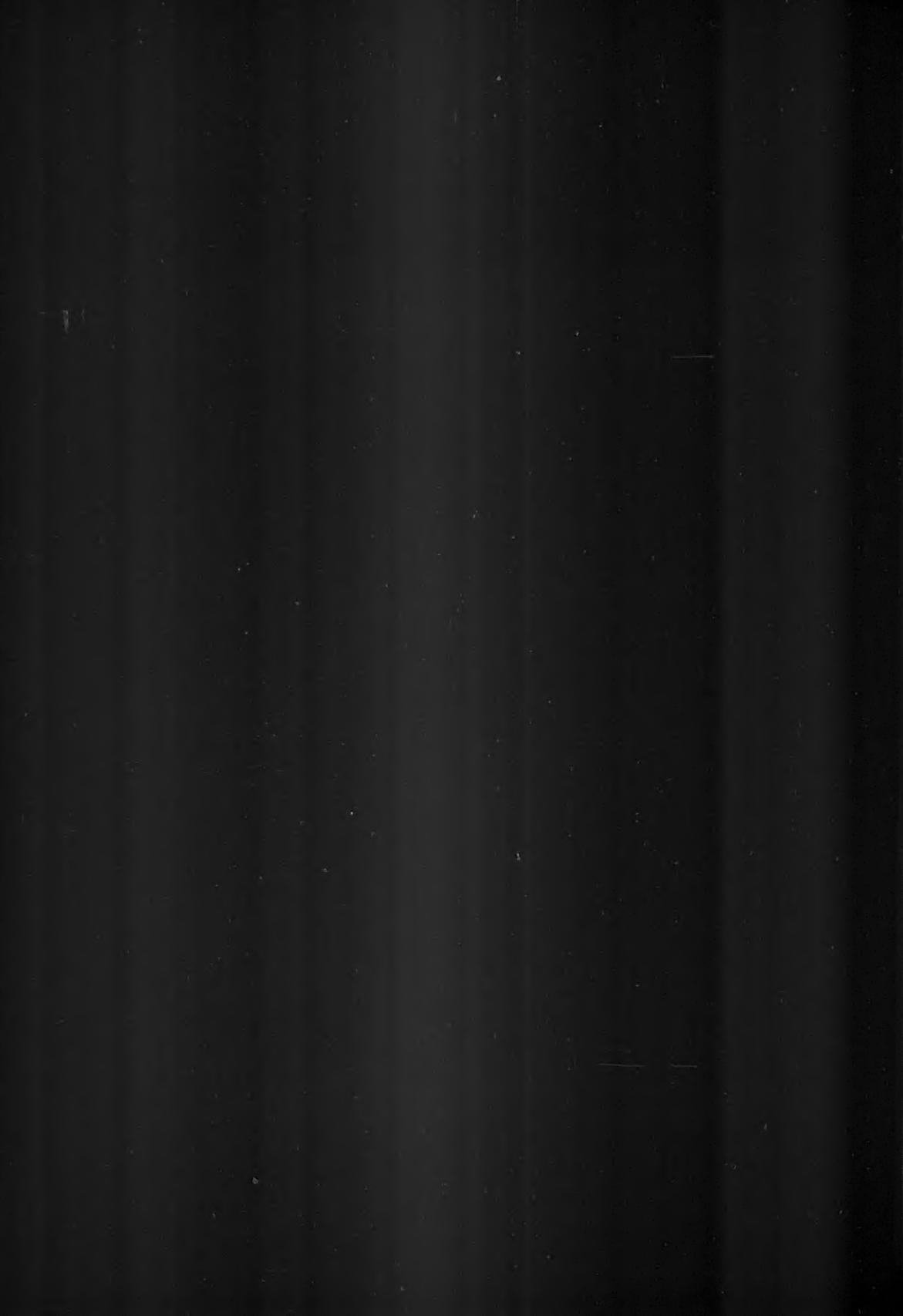
Professor Henderson, of the Colorado Museum at Boulder, Colorado, and a member of the Club, was called on to tell something of the work of the Colorado Museum. He spoke of the various collections of bird skins and eggs, but explained that the real interest of the museum lay in western archaeology, fossils and shells.

Two other visitors, Mr. Robb, of the Province of Quebec Society for the Protection of Birds, and Professor Frederick S. Webster, formerly connected with the Nature Study Department in the schools of Pittsburgh, spoke briefly to the Club.

Mr. Wyman then gave a short talk on birds of Lower California, pointing out on a map the different natural formations of the country. He exhibited skins of species found there, with the corresponding subspecies found here.

This being the last meeting of the year, nominations for officers for the ensuing year were in order. Dr. Rich made a motion, seconded by Dr. Bryan, that the present officers be nominated to succeed themselves. Motion carried. Adjourned.—ELLA H. ELLIS, *Secretary*.





**For Sale, Exchange and Want Column.**—Any Cooper Club member is entitled to one advertising notice in each issue free. Notices of over ten lines will be charged for at the rate of 15 cents per line. For this department, address W. LEE CHAMBERS, *Drawer 123, Eagle Rock, California.*

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WESTERN WILD LIFE CALL, 1913-14, issued by the "California Associated Societies for the Conservation of Wild Life", was a campaign publication in four numbers put out at the time no-sale of game was being advocated. The publication is of some little historical as well as ornithological interest. Complete sets, as long as they hold out, will be supplied gratis upon request to THE DIRECTOR, *Museum of Vertebrate Zoology, University of California, Berkeley, California.*

FOR SALE or trade for good field glass, 3½ by 4½ Seneca plate camera, double extension bellows and fine lens, cost \$40. For sale—skins of Western and Dusty Horned Owls, \$2 each, prepaid.—J. L. SLOANAKER, *907 W. Mansfield Ave., Spokane, Wash.*

FOR EXCHANGE—I have many nice skins of Illinois birds with full data to offer in exchange for birds from western states, Central and South America, or foreign countries.—HENRY K. COALE, *Highland Park, Ill.*

FOR SALE—Bird-Lore, vols. 3, 4, and 14 to 20 complete; also 50 extra copies of all volumes. A few odd volumes of The Condor.—C. M. CASE, *306 Blue Hills Avenue, Hartford, Connecticut.*

WANTED—Books, pamphlets, bulletins, or clippings regarding economic ornithology; especially some of the earlier government or biological survey bulletins. Let me know what you have.—JOHNSON A. NEFF, *Department of Horticulture, Oregon Agricultural College, Corvallis, Oregon.*

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Respectfully submitted,

THE EDITORS OF THE CONDOR.

